

THE IRON AGE

A Review of the Hardware, Iron and Metal Trades.

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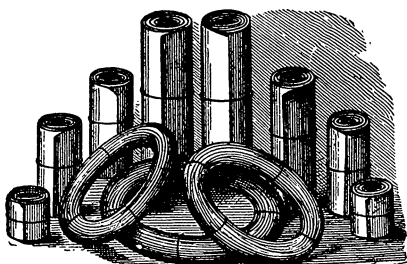
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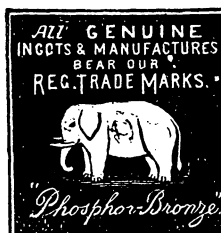
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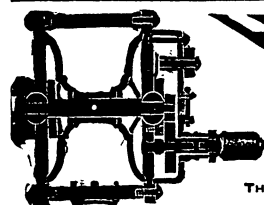
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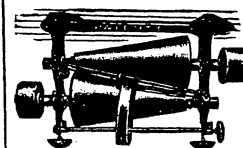
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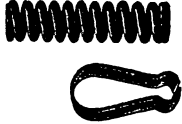
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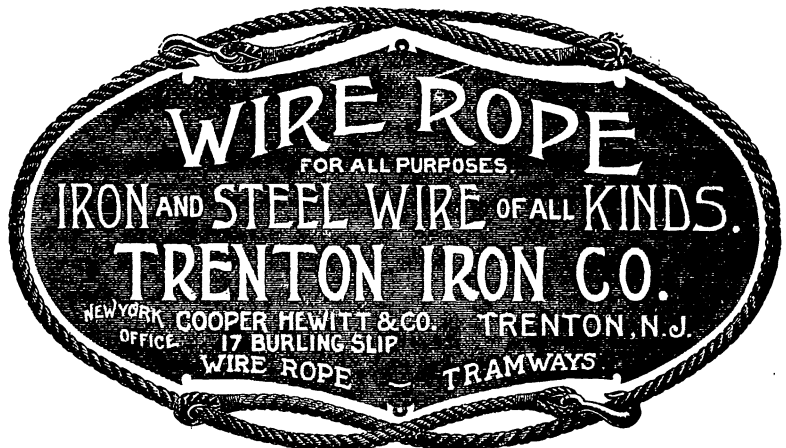
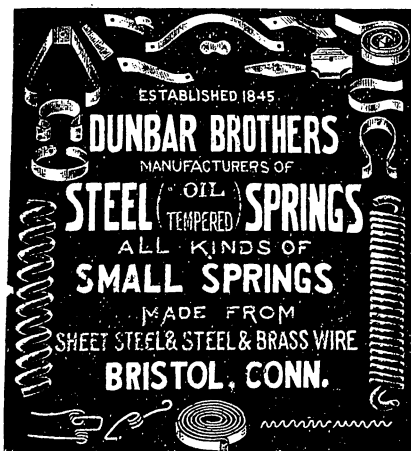
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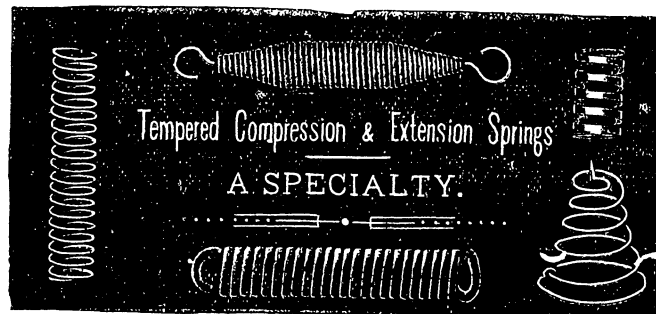
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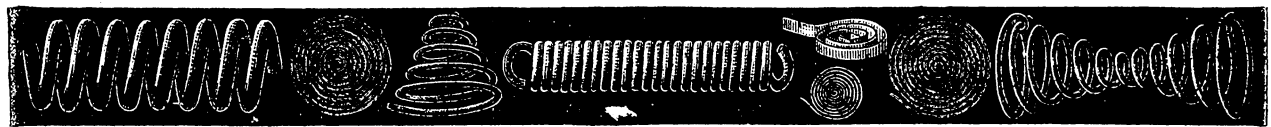
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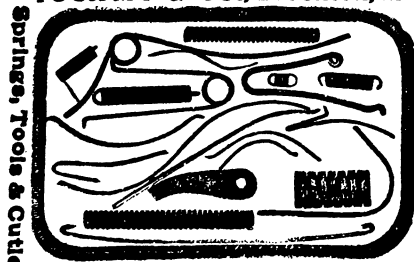
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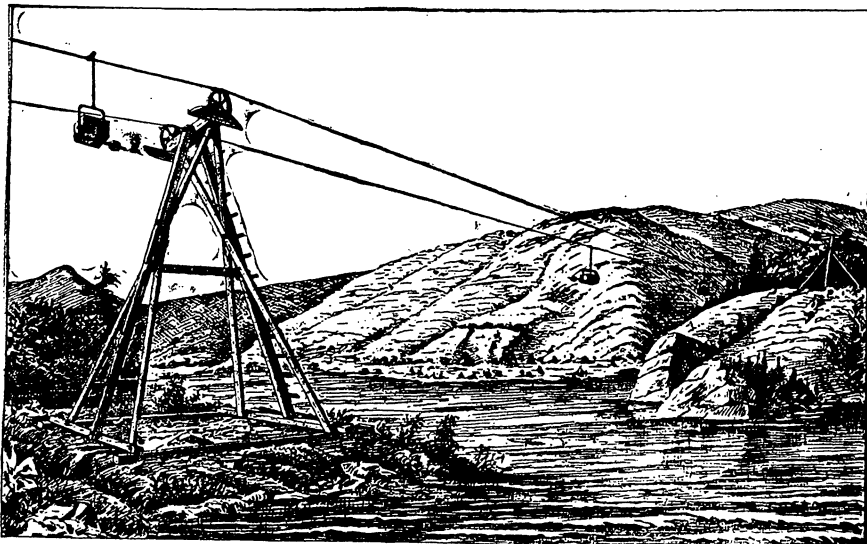
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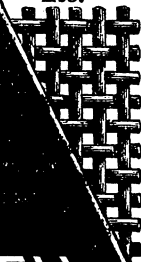
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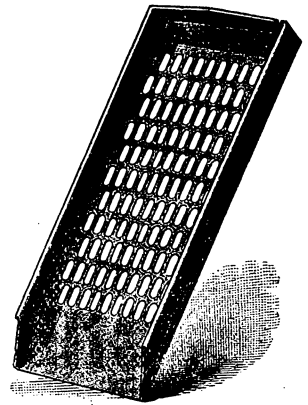
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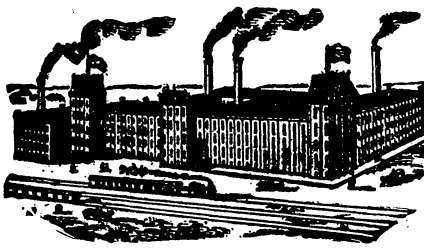
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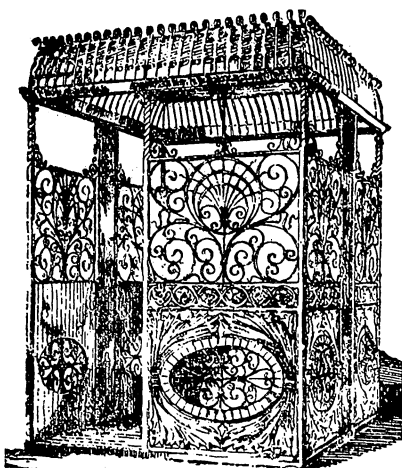
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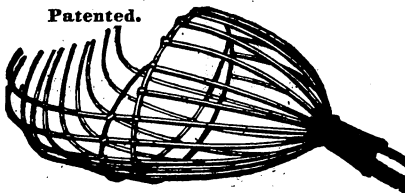
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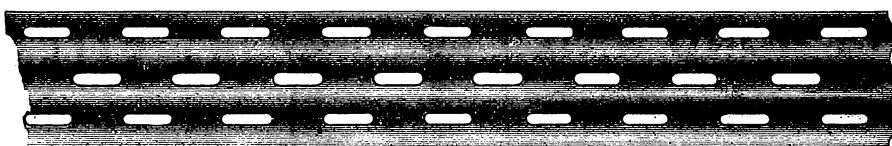
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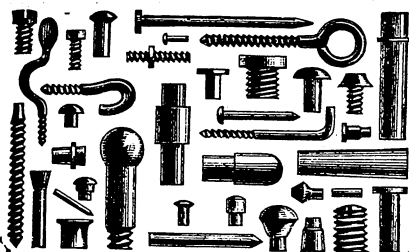
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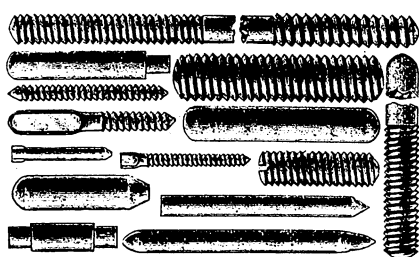
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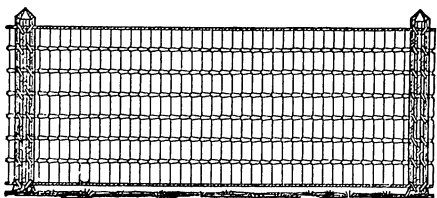
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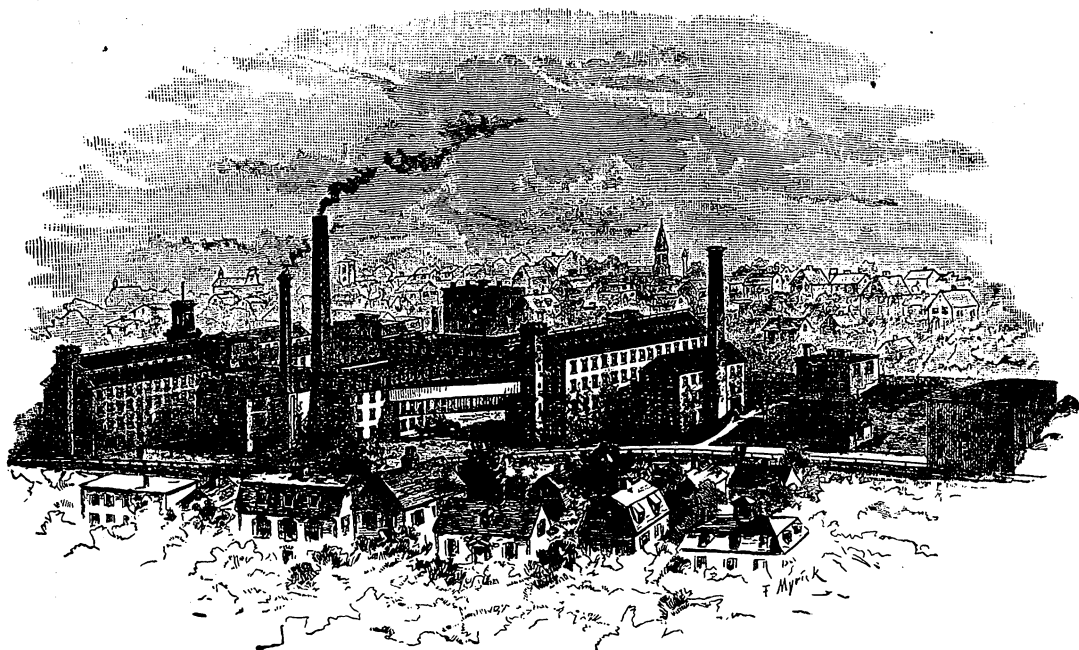
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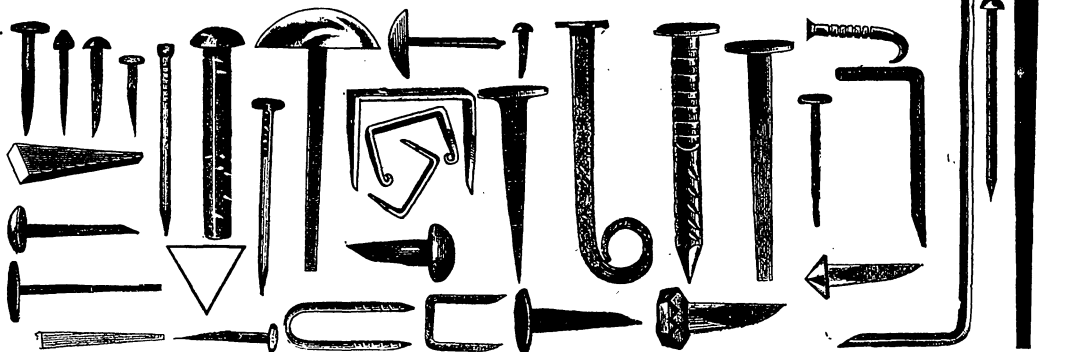
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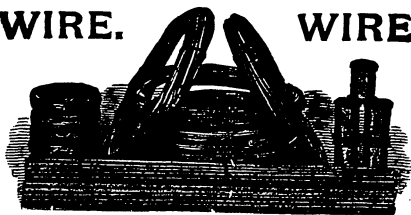


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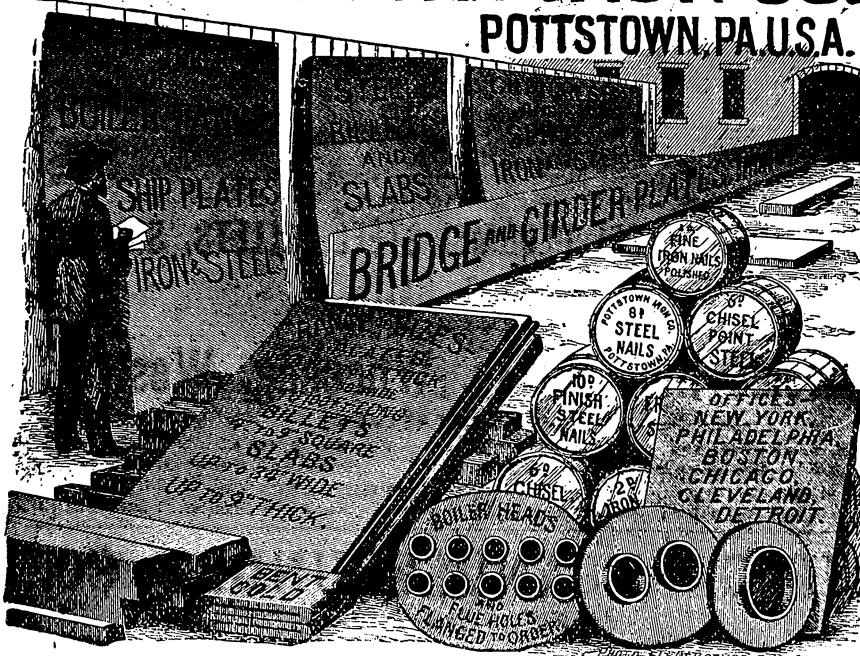
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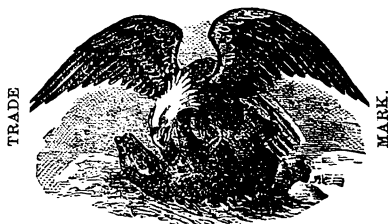
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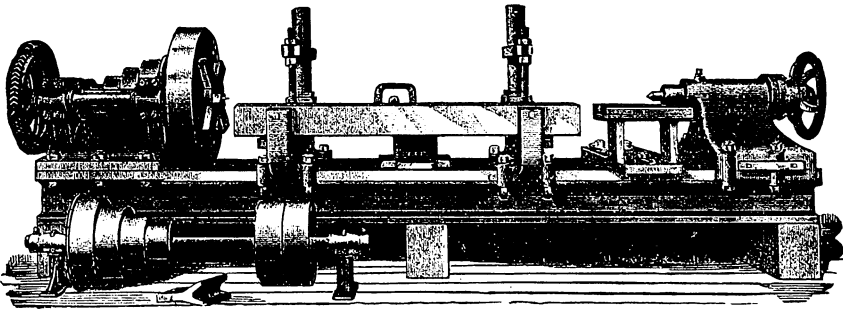
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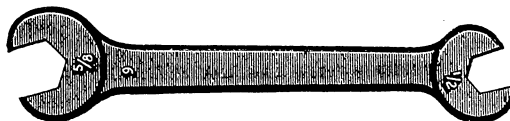
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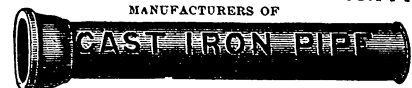
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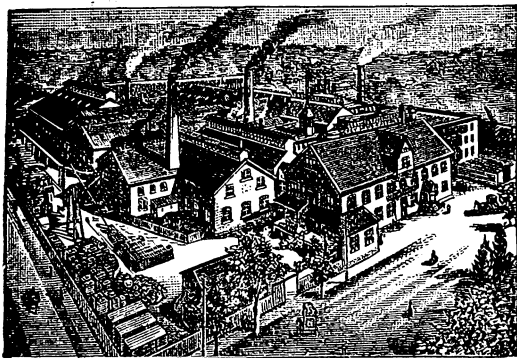
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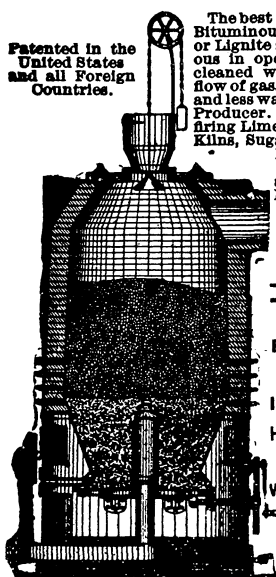
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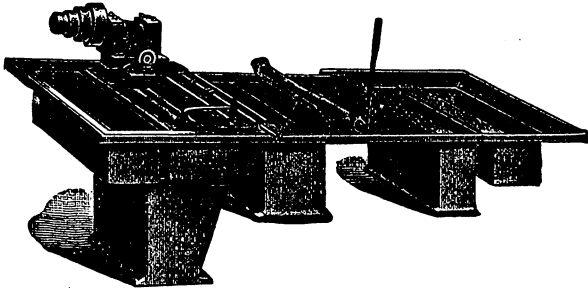
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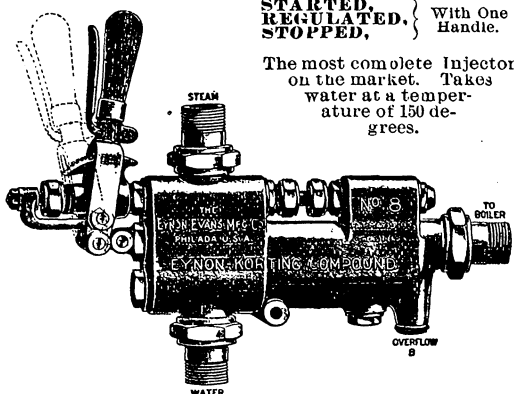


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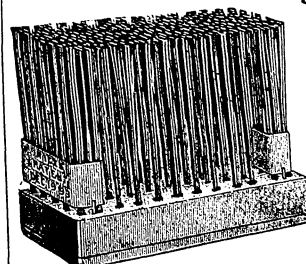
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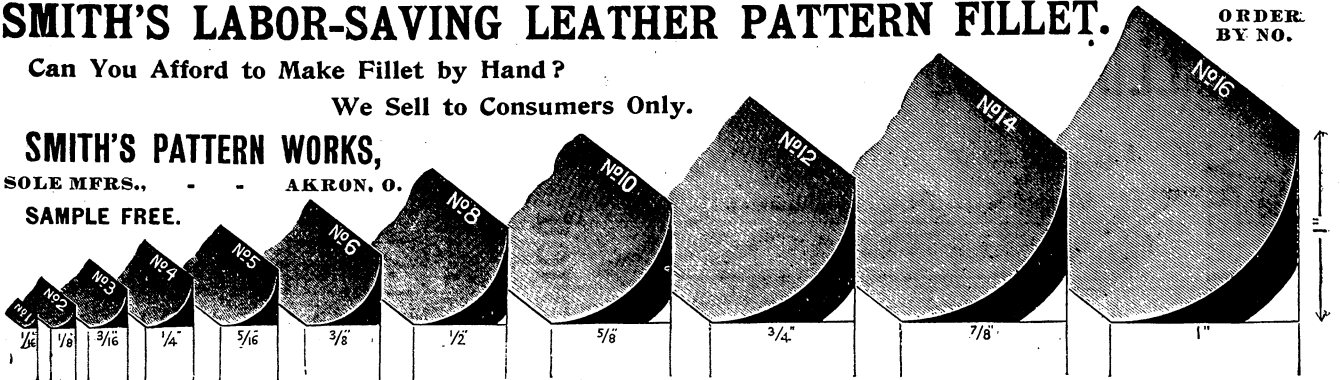
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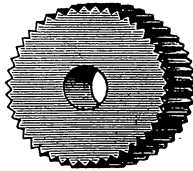
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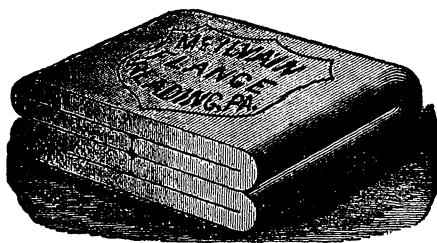
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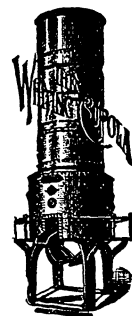
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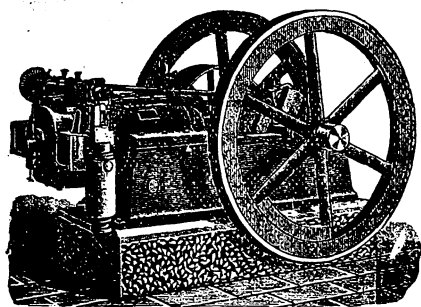
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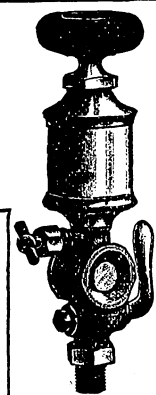
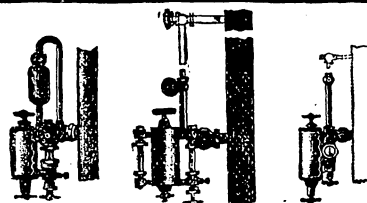
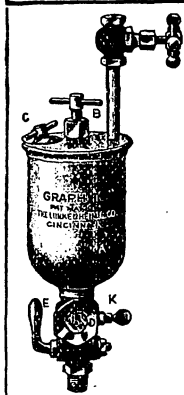
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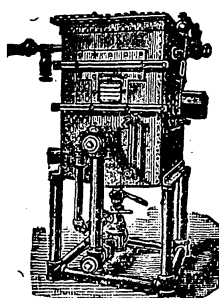
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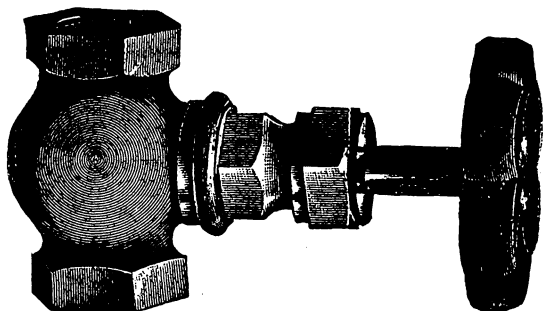
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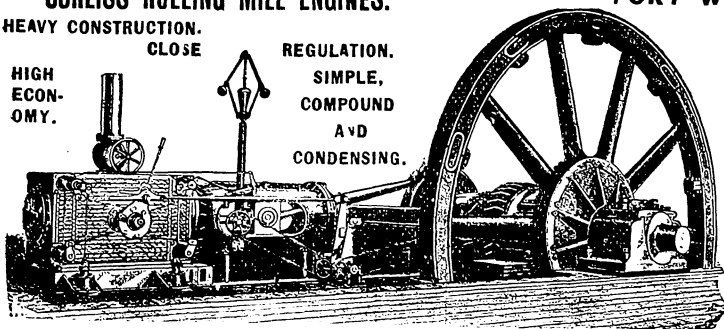
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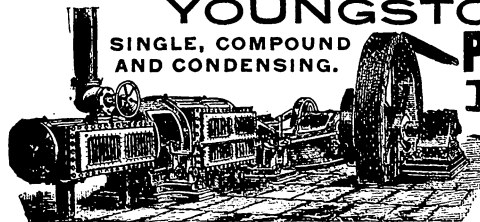
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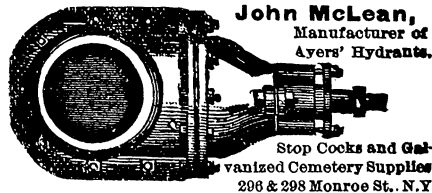
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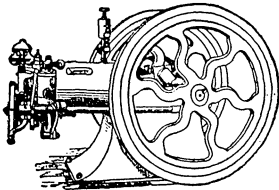


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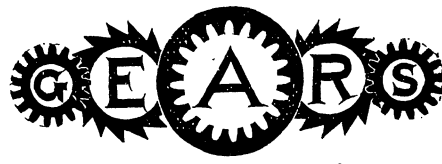
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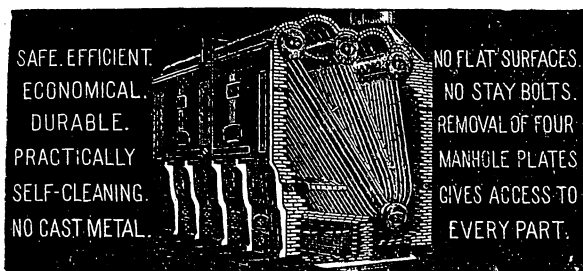
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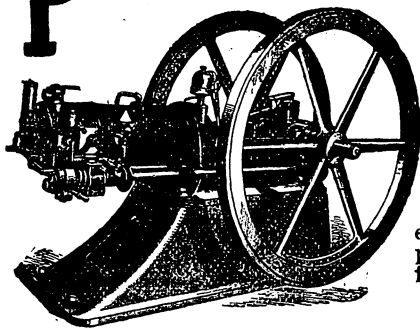


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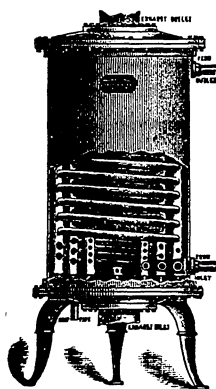
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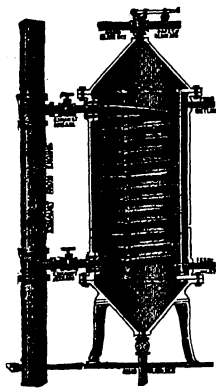
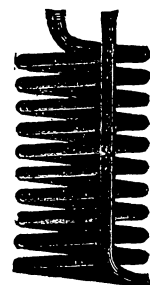


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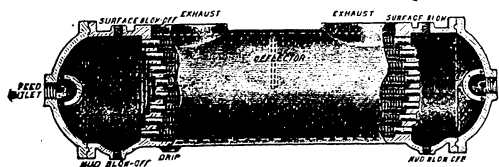
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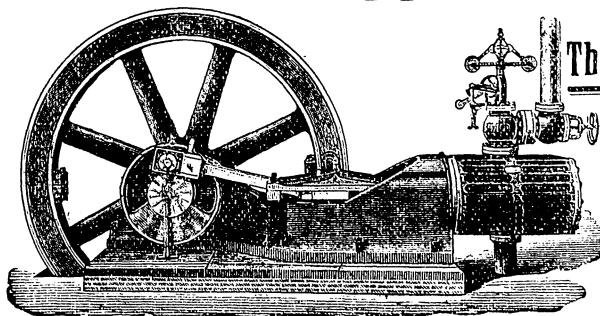
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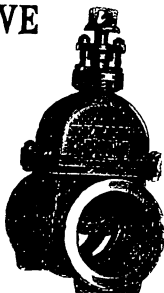
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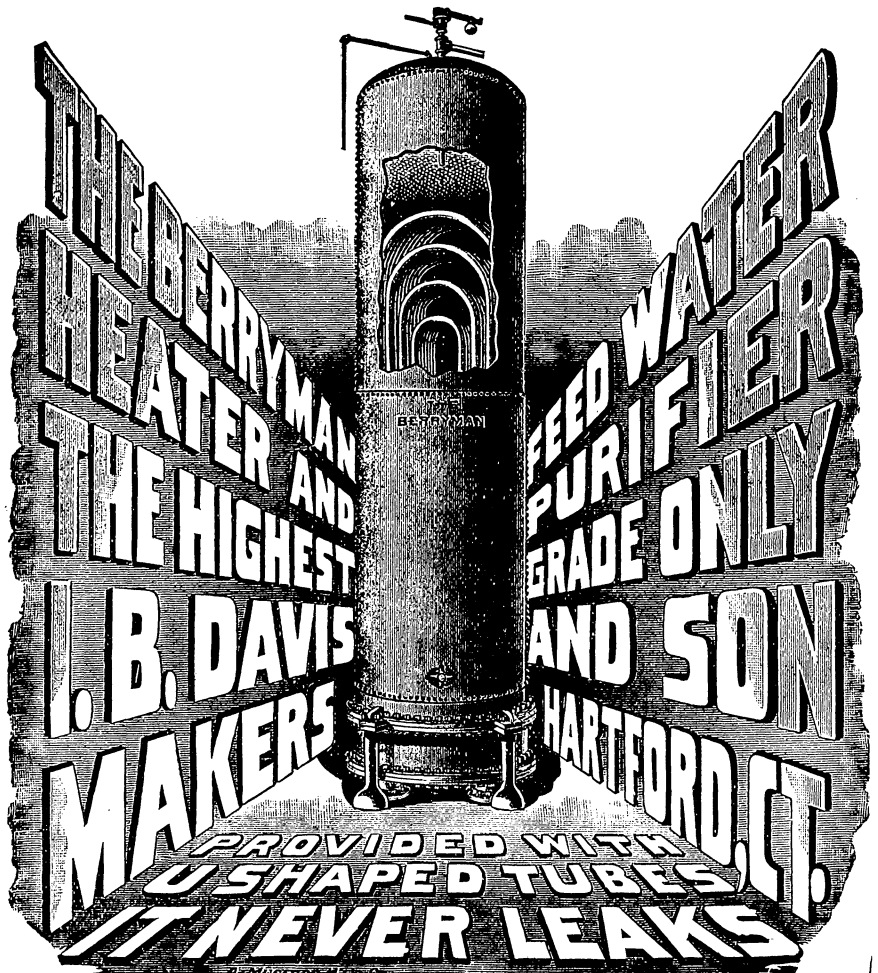
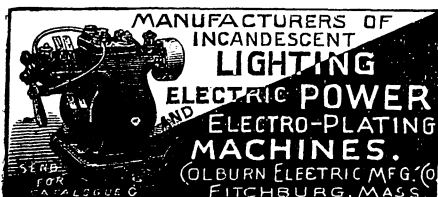
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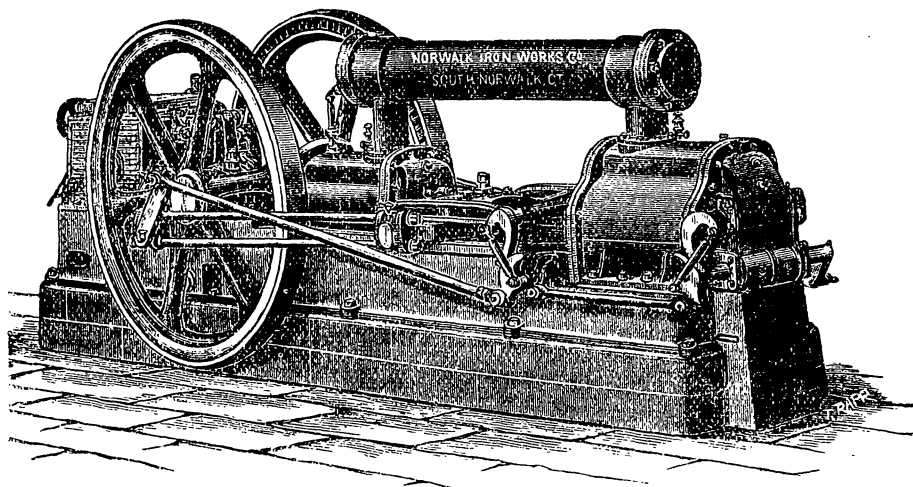
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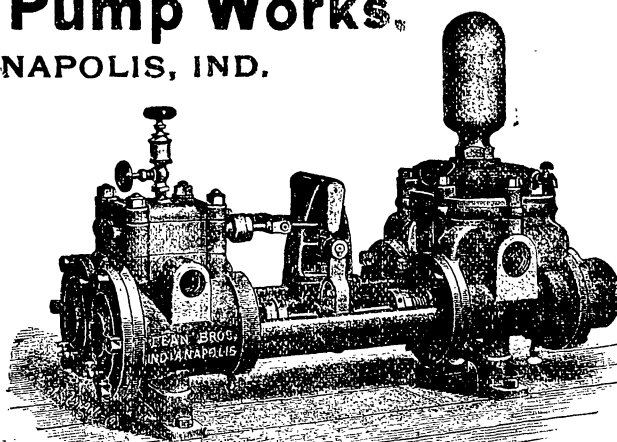
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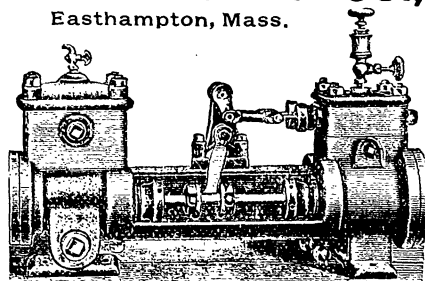


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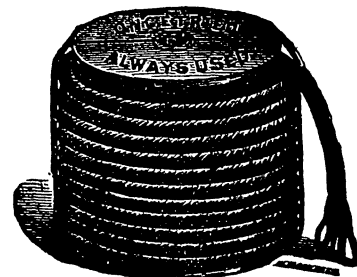
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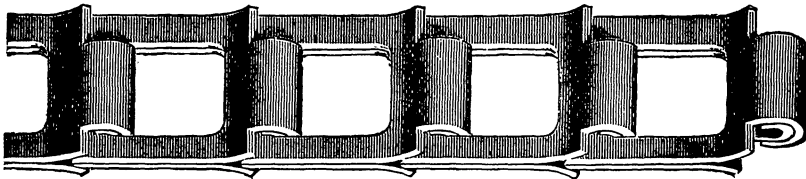
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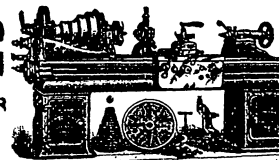
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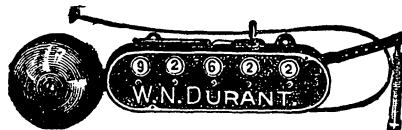
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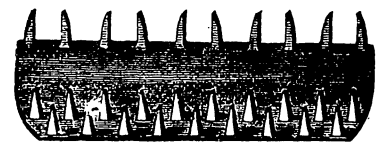
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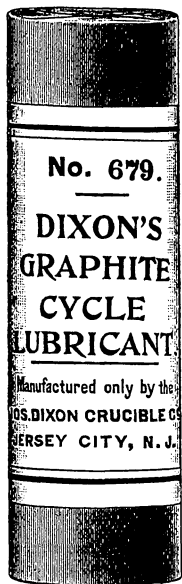
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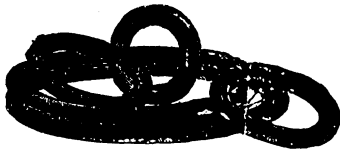


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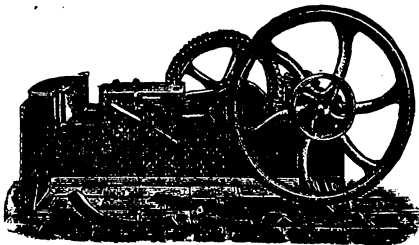
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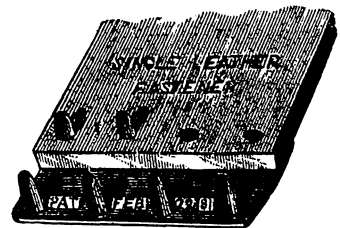
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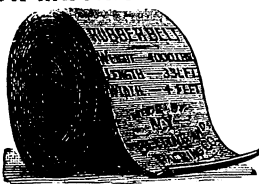
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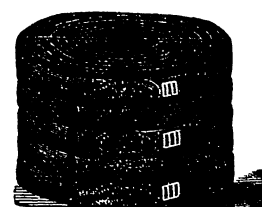


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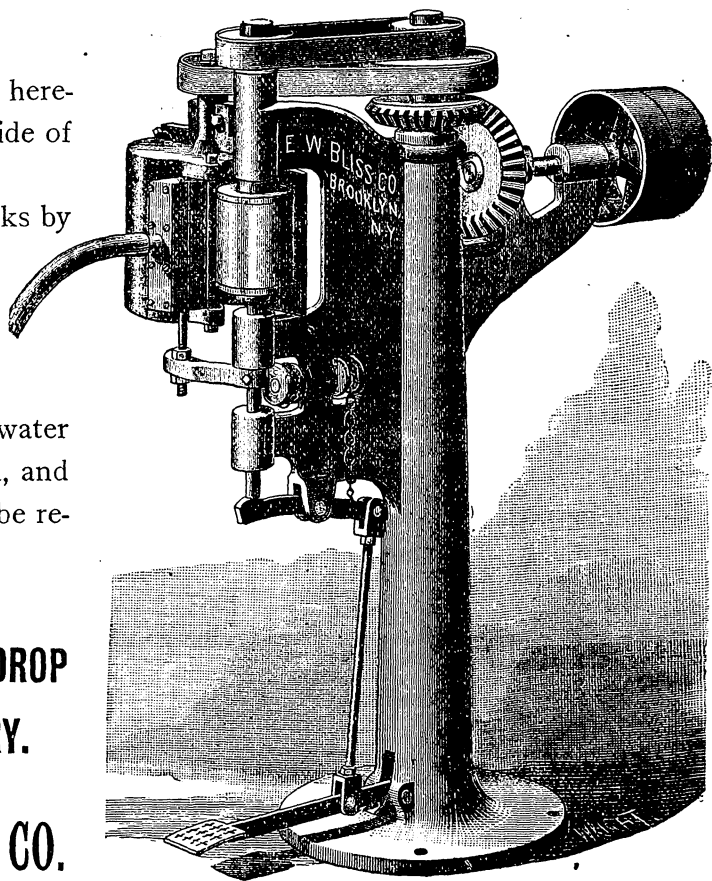
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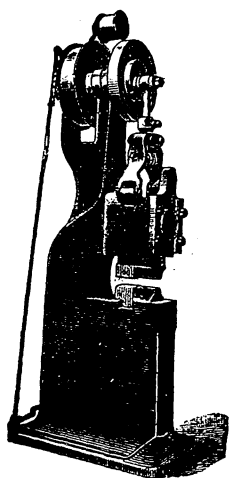
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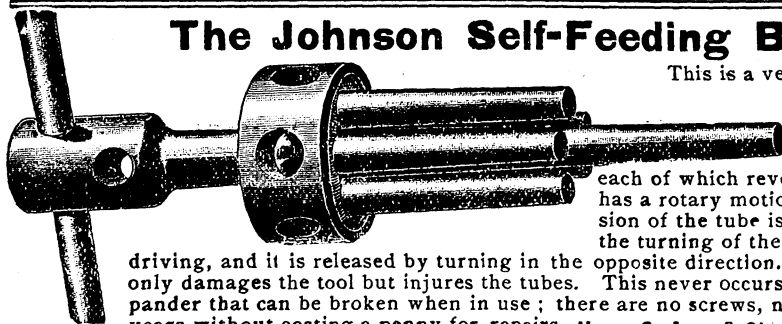
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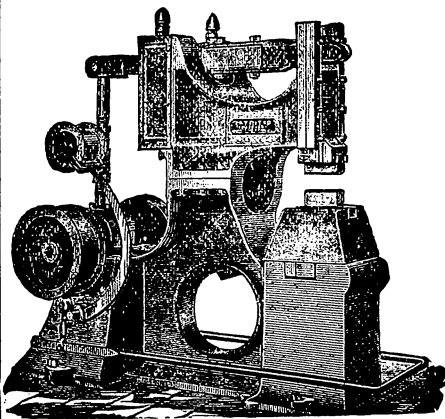
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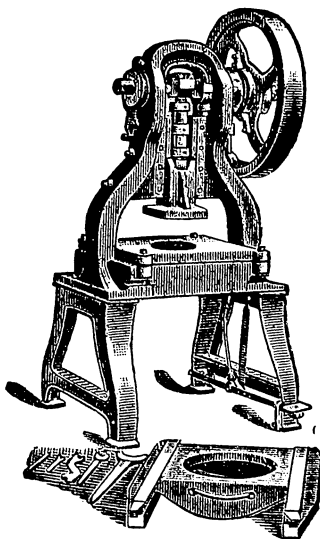
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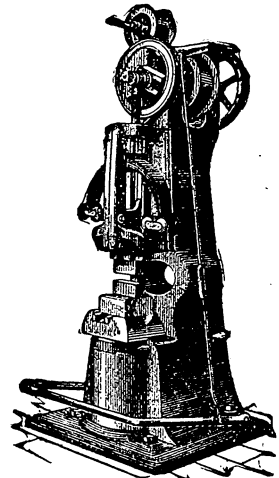
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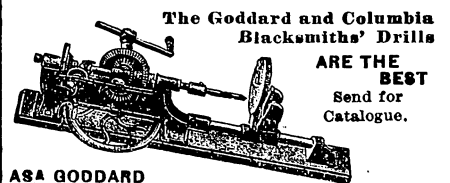
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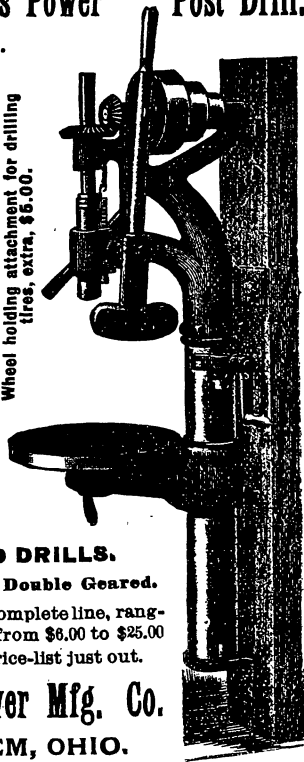
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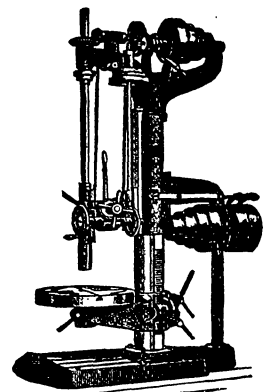
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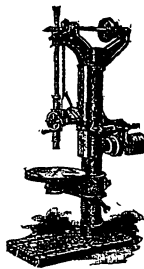
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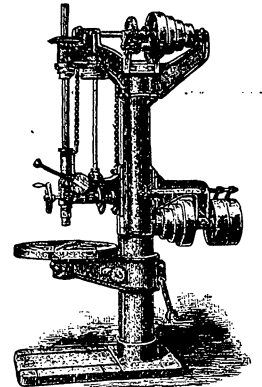


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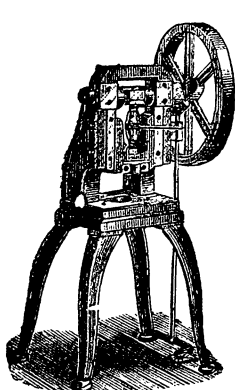
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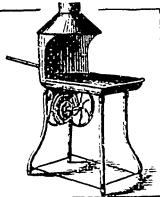
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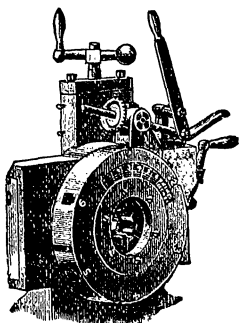
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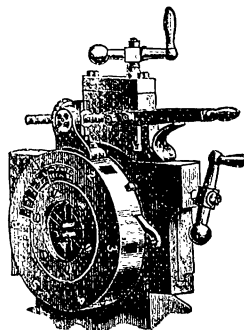
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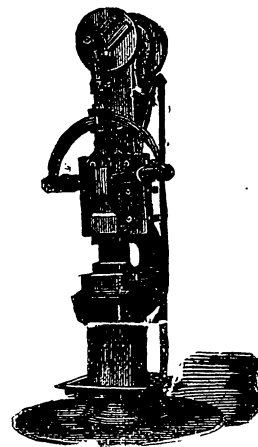
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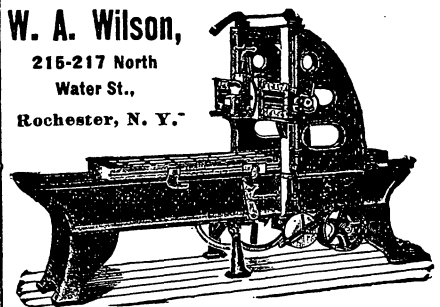
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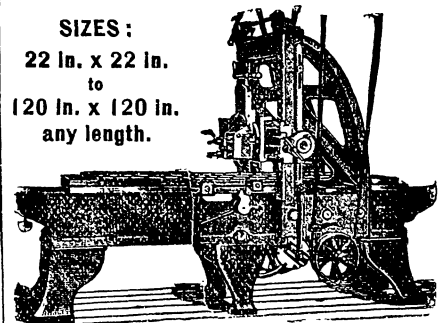
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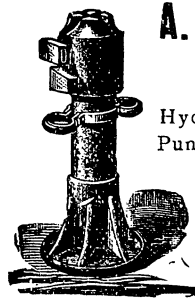
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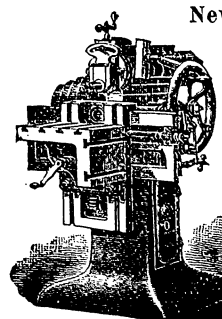
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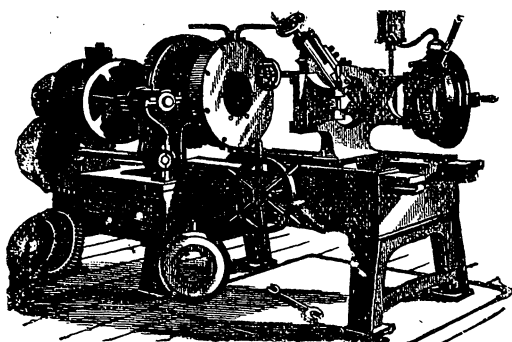
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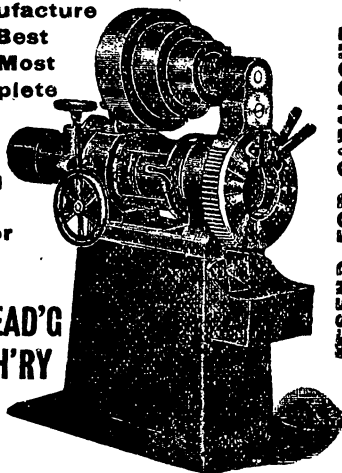
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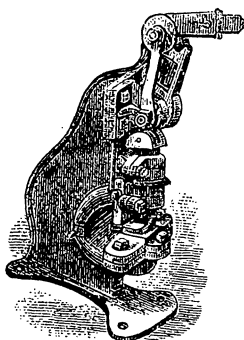


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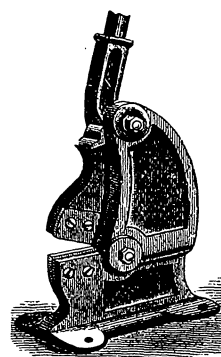
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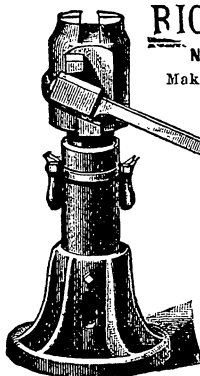
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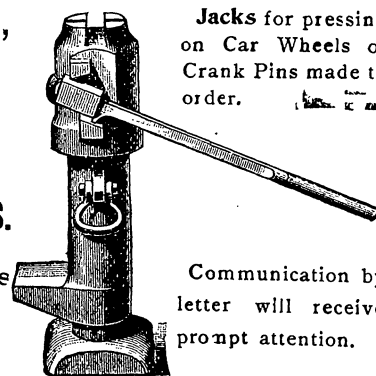
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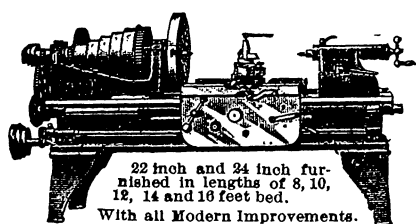
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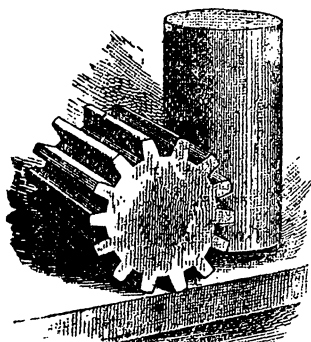
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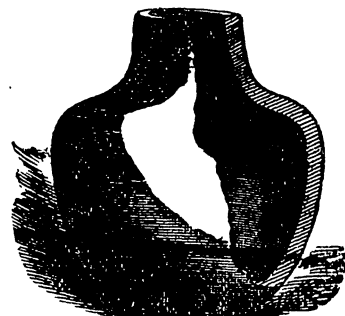
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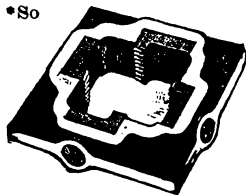
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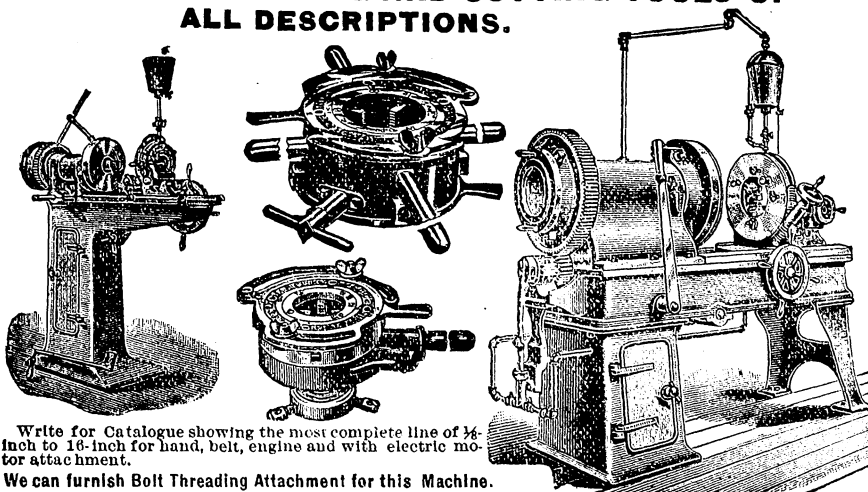
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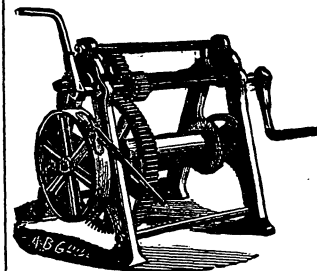
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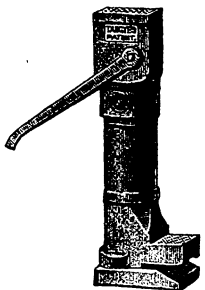
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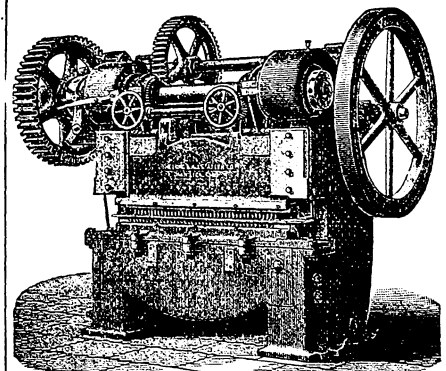
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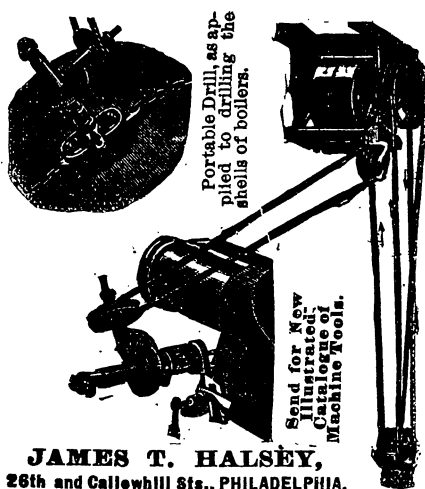
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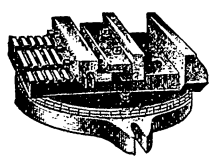


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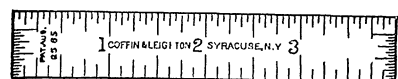
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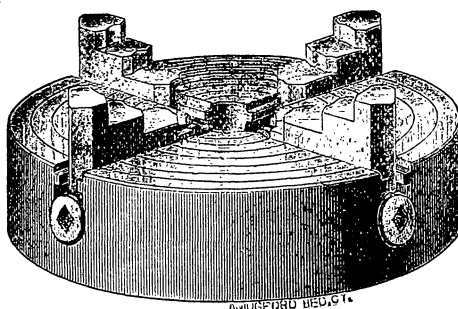
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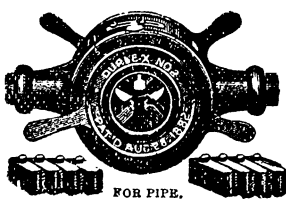
Sole European Agents, SELIG SONNENTHAL & CO., LONDON.

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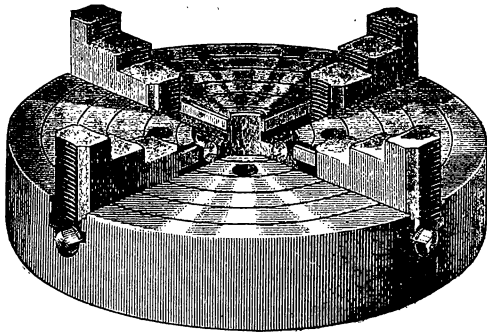
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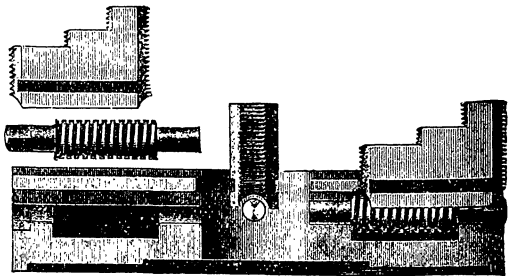
IMPROVED INDEPENDENT LATHE CHUCK.

No. 18.



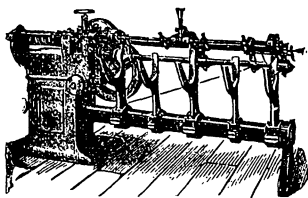
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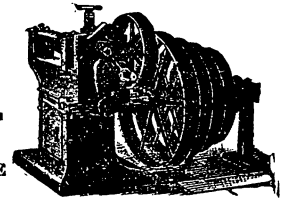
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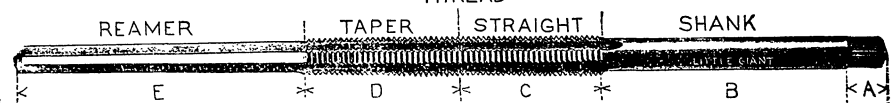


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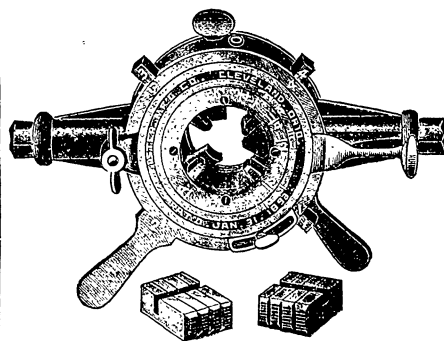
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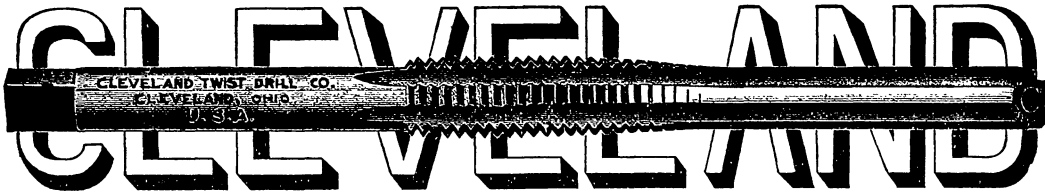
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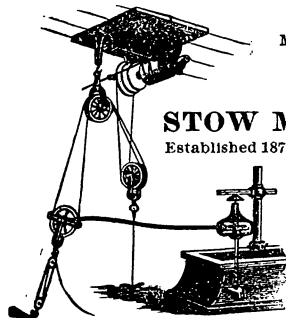
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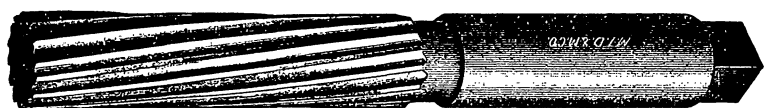
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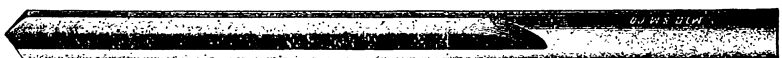
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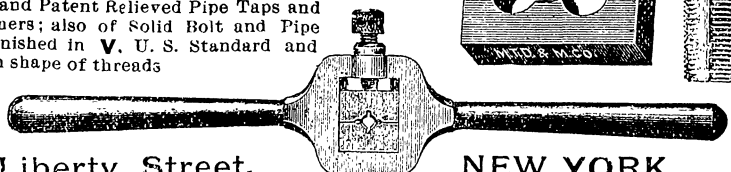
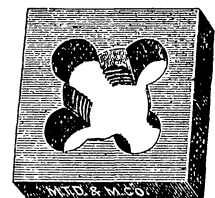
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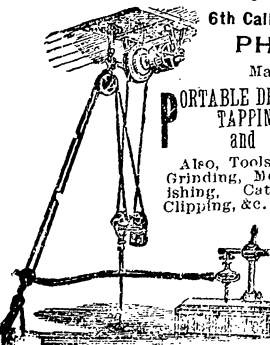
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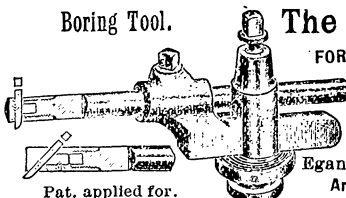
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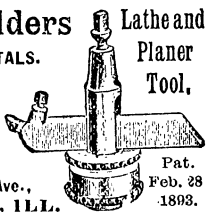
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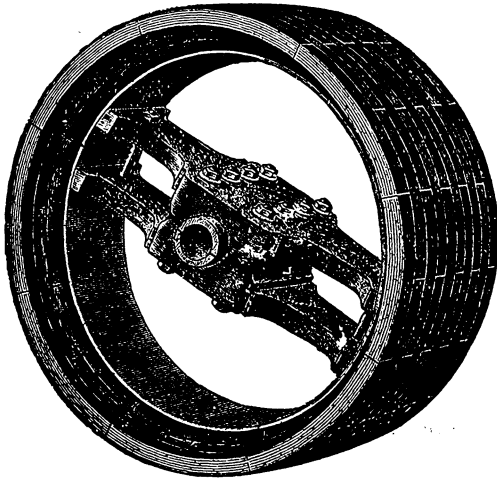
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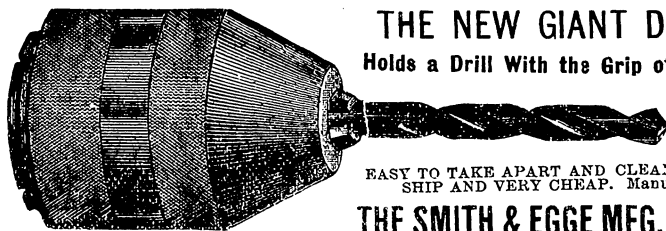
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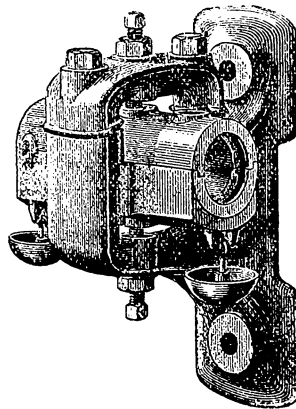
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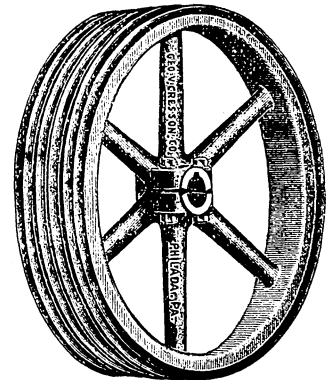
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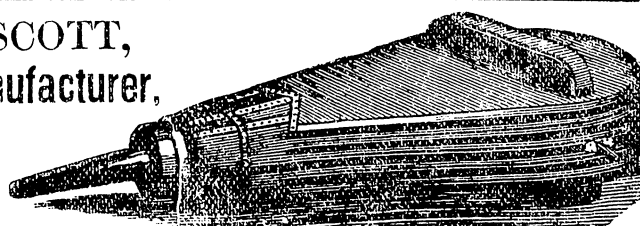
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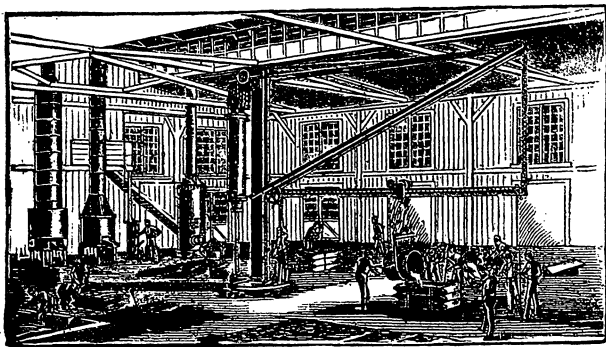
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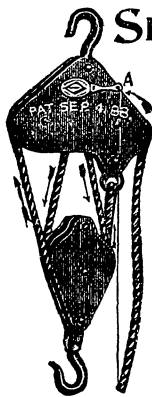
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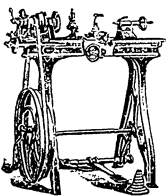
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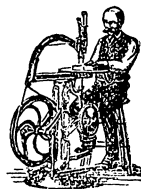
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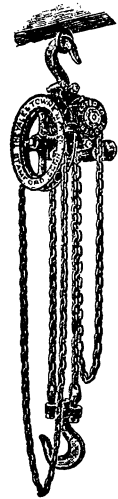
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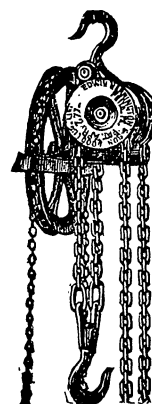
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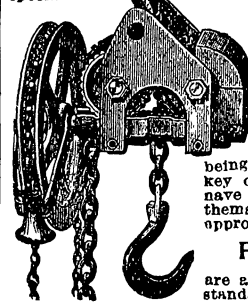
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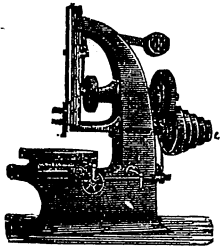
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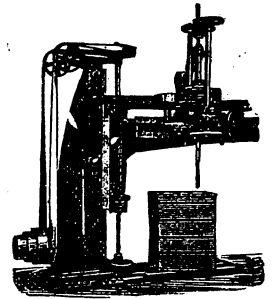


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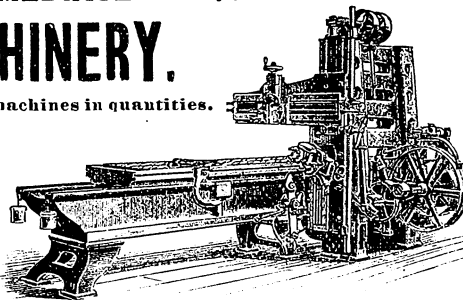
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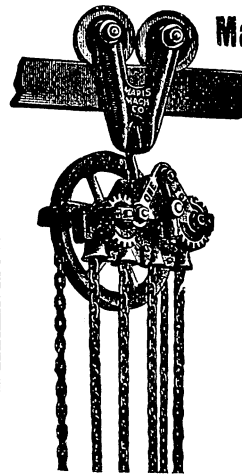
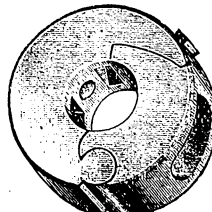
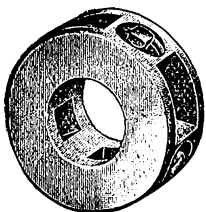
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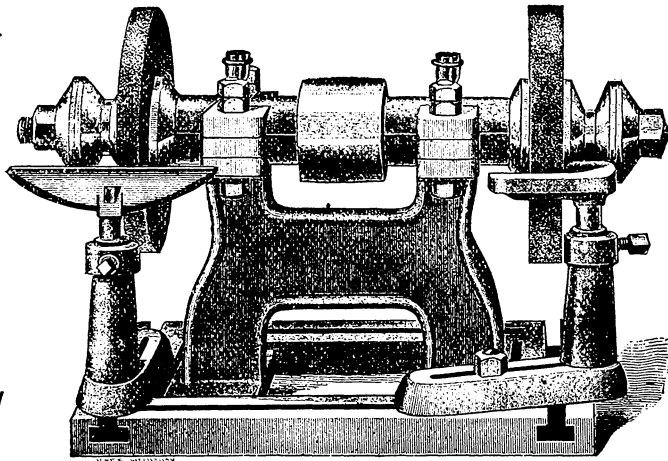
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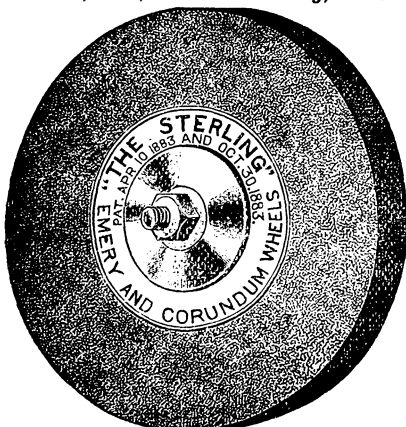
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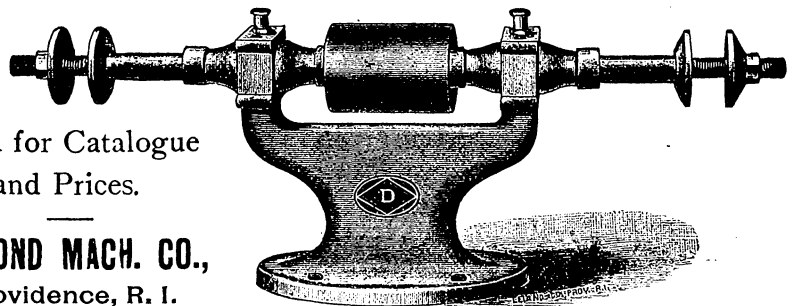
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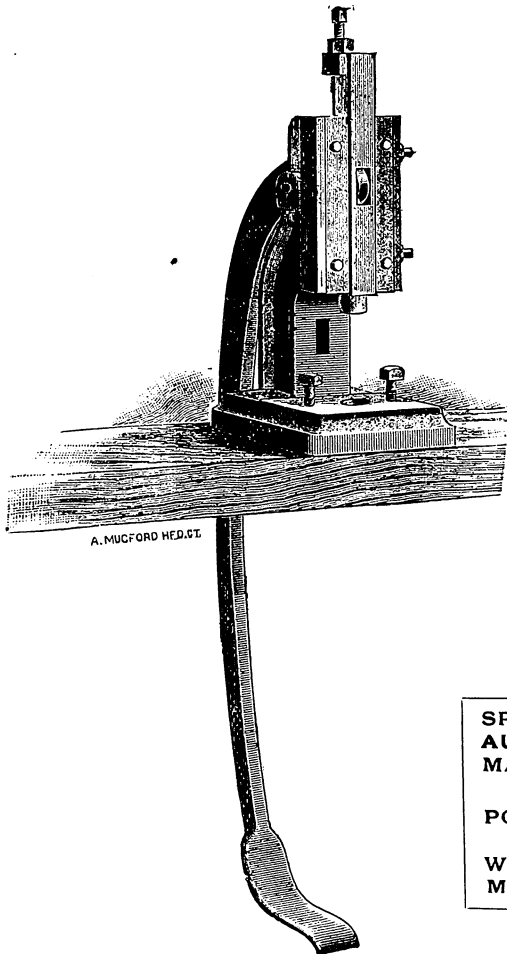
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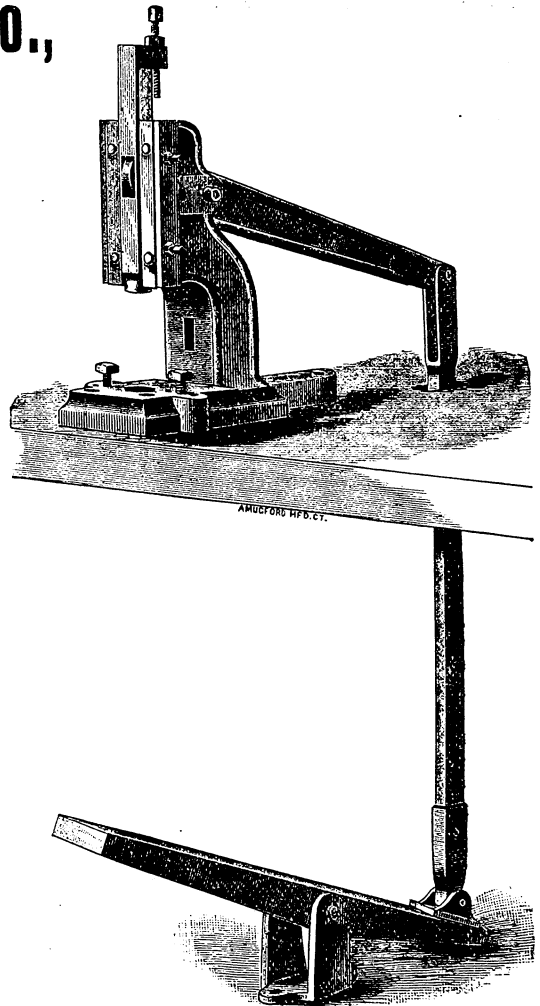
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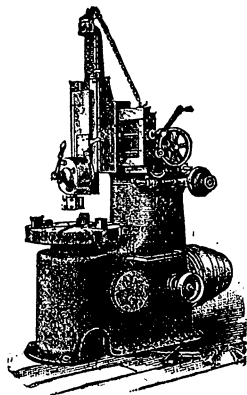


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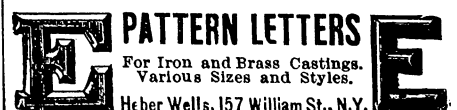


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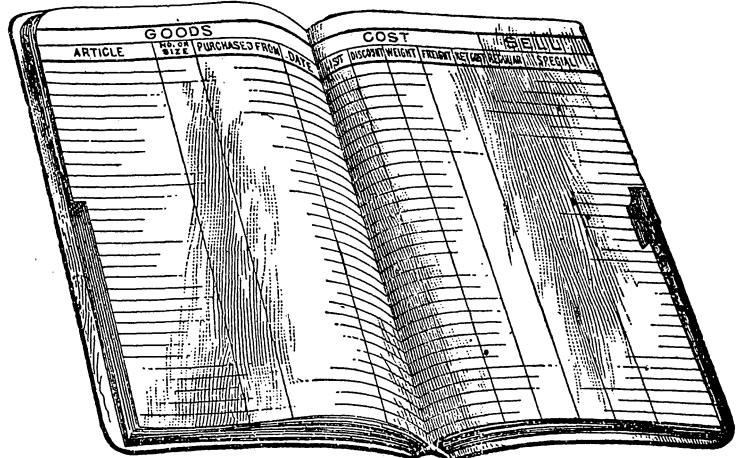
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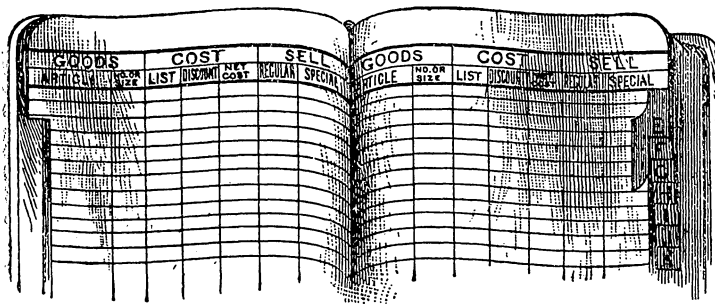
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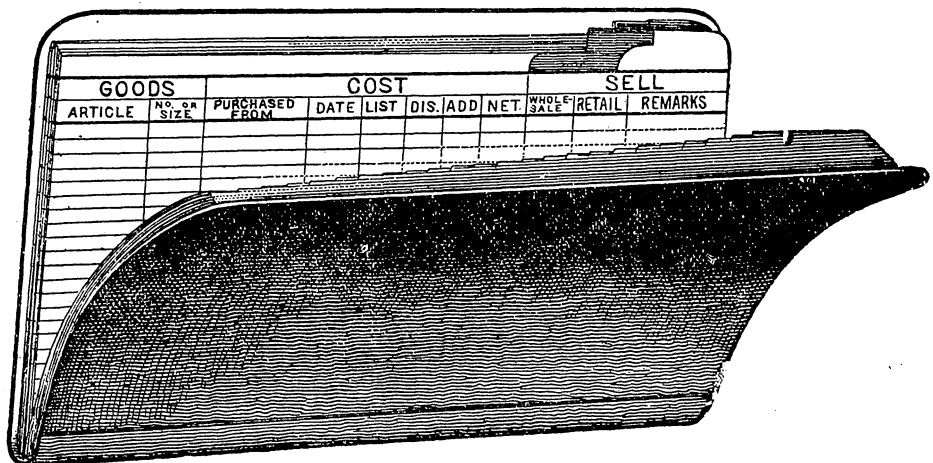
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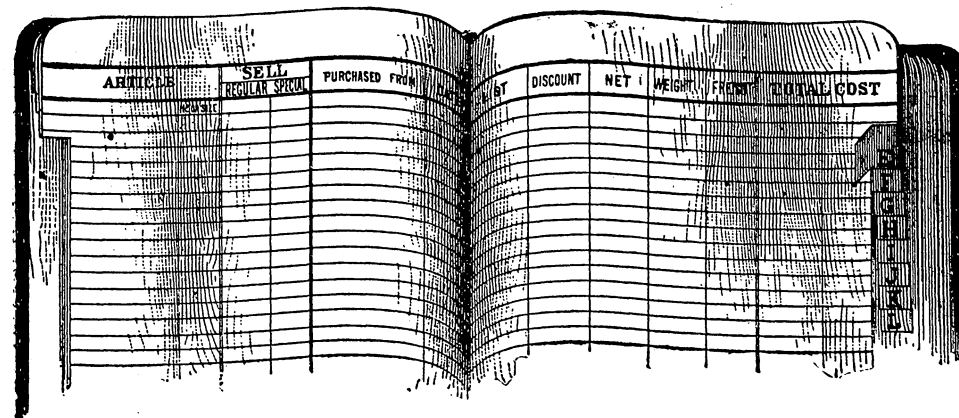
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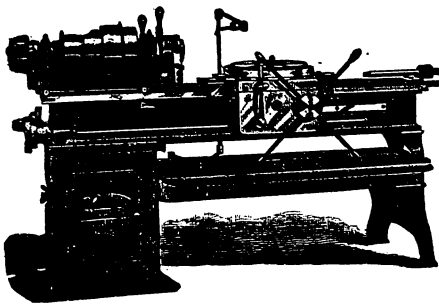
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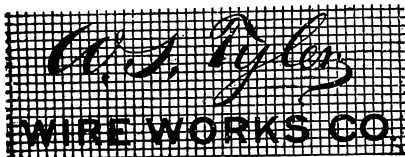


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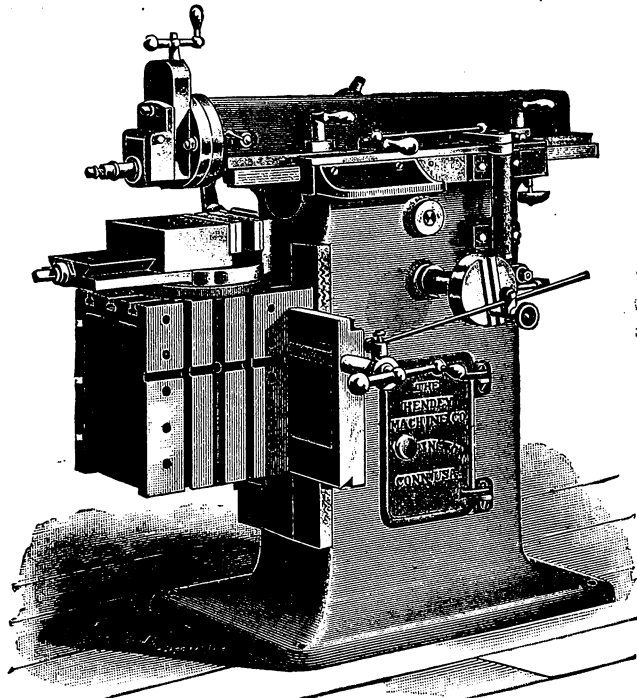
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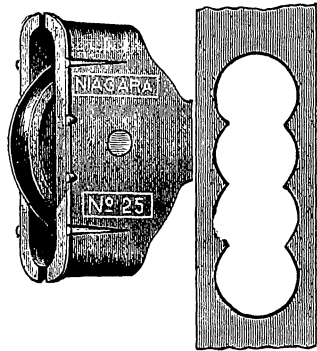


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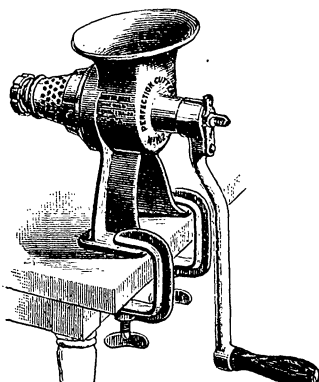
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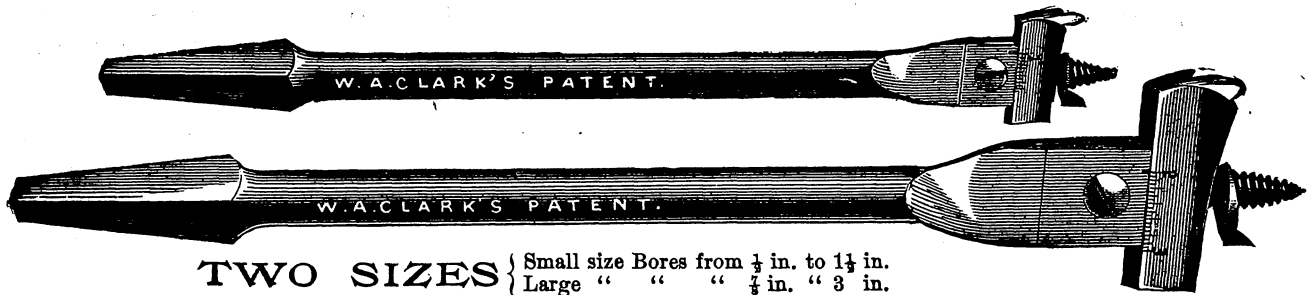
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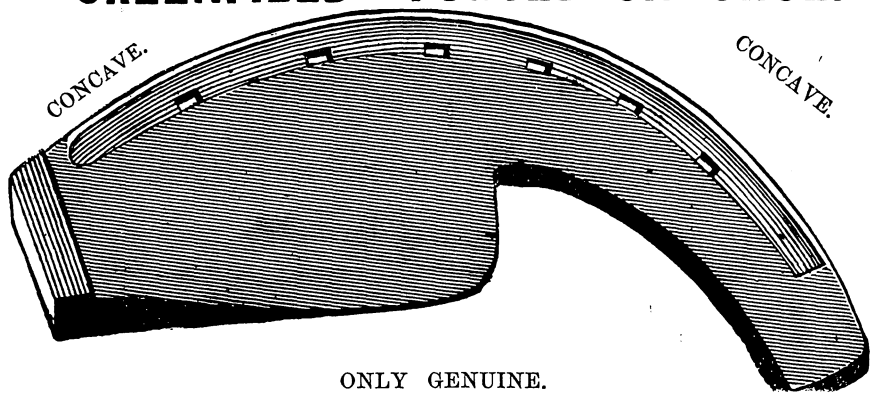
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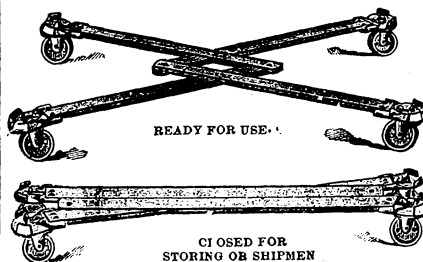
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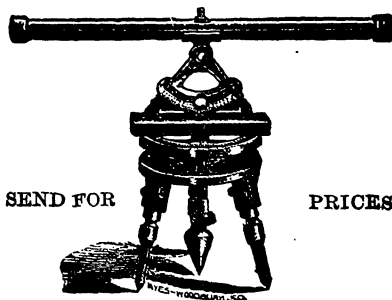
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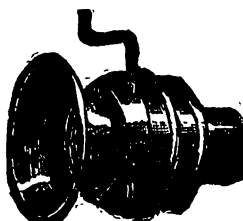
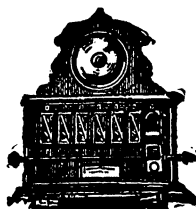
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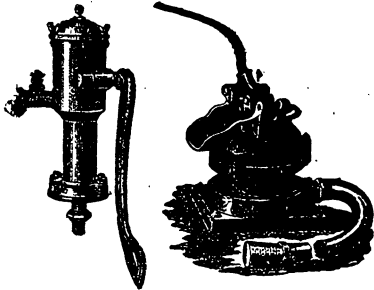
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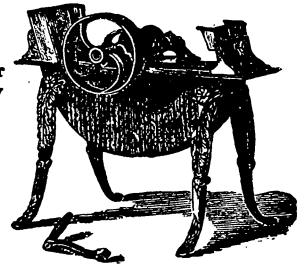
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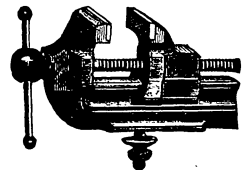
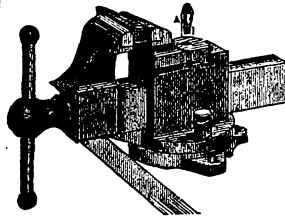
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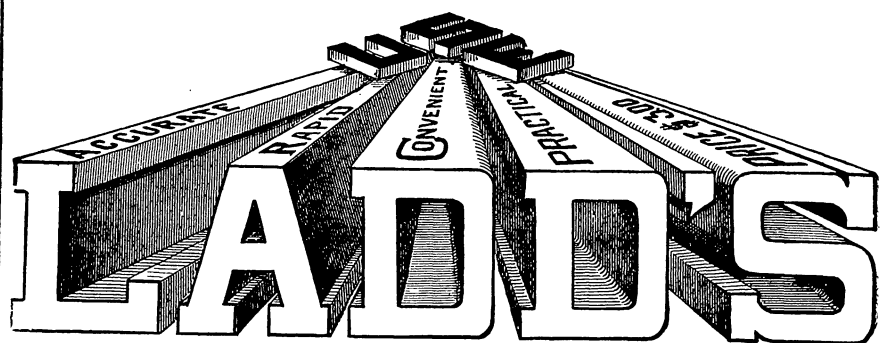
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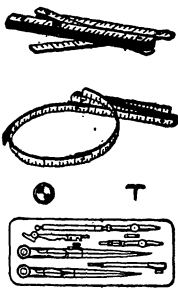
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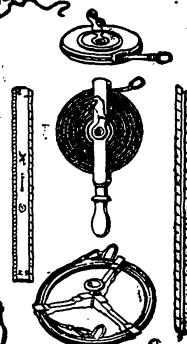
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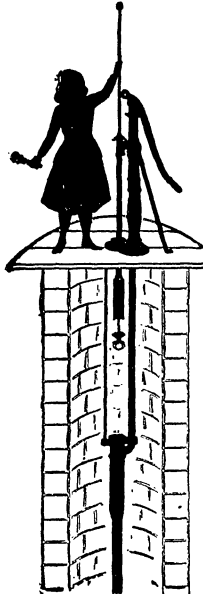
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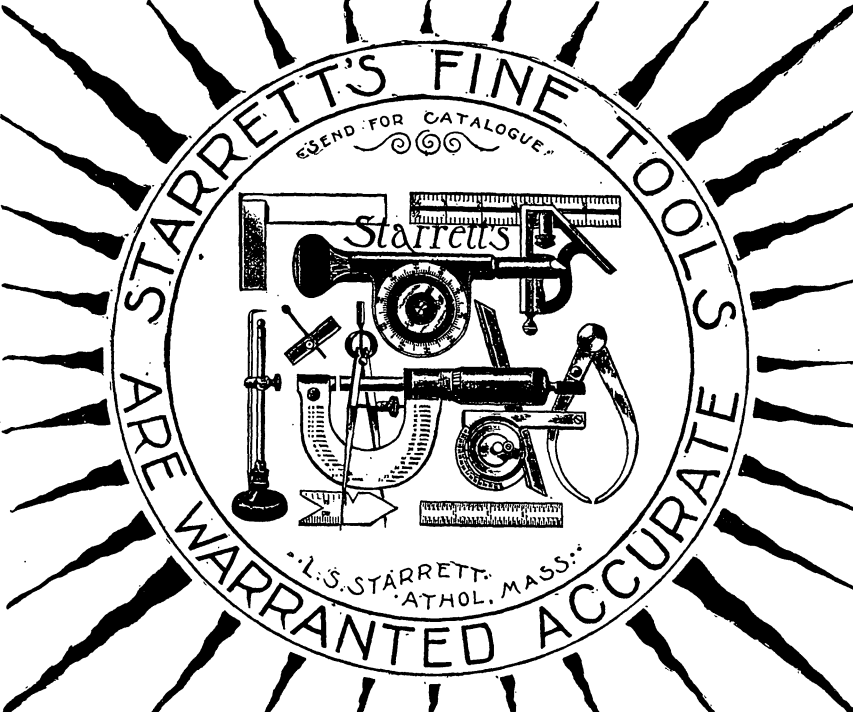


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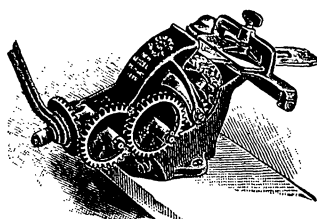
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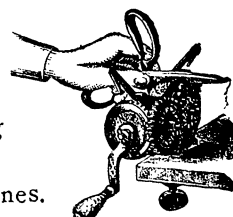


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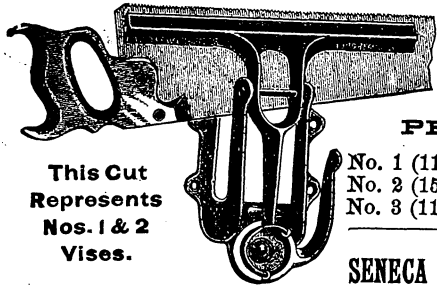
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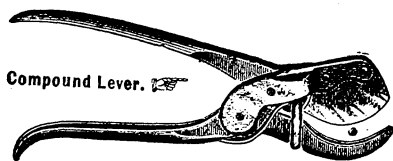
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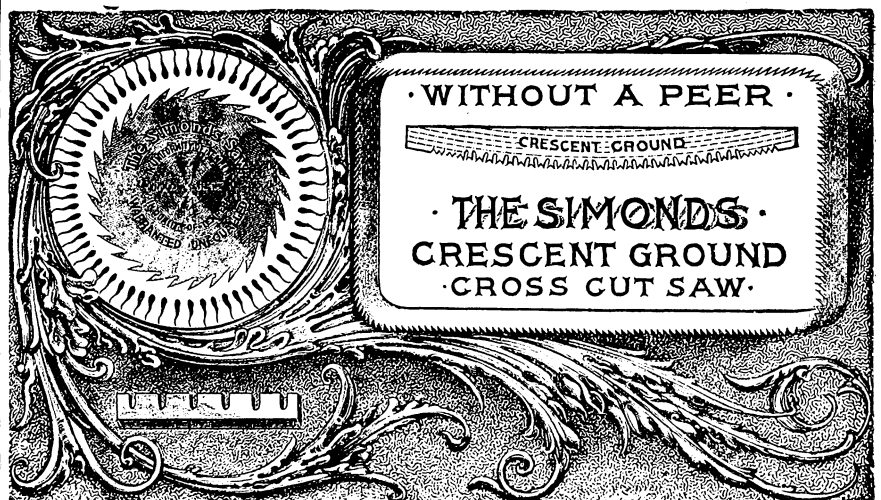
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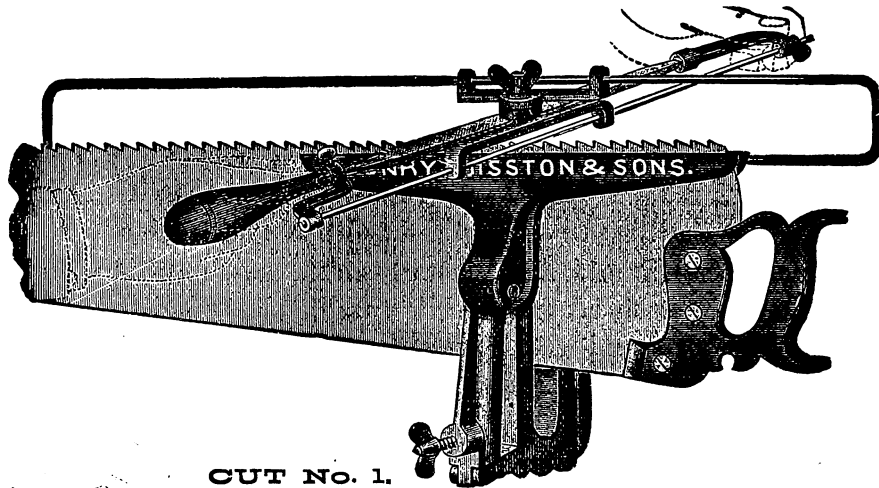
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Simonds Mfg. Co. Simonds Saw Co.

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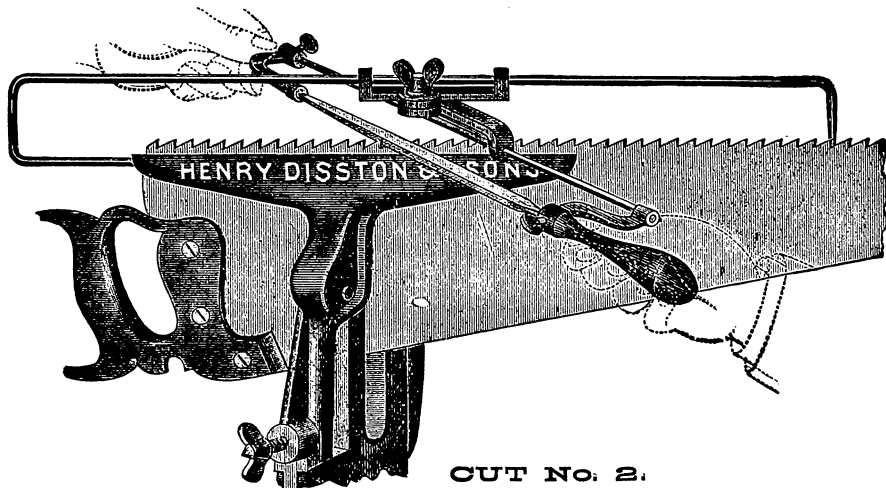
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ESPECIALLY DESIGNED TO ASSIST THOSE NOT SKILLED IN THE ART
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Cut No. 1 shows a saw and the attachment in proper position for filing the first side; and Cut No. 2 shows the saw and attachment reversed and in position to file the second side. There are three marks on one of the hubs of the swivel attachment, and one mark on the other. One of the three marks shows when it is in position No. 1, and the other designates when it is in position as shown in No. 2. The third, or centre, marks show when it is in position for filing Rip Saws.



CUT NO. 2.

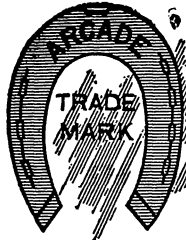
To obtain the correct position, loosen the wing nut and move the guide around to the point desired; after tightening wing nut, loosen screw in file handle, then turn handle until file gives the shape tooth wanted.

A good way is to select a tooth of correct shape and let file down into it, tighten set screw in handle, then file a tooth to see if the shape suits. If not turn the file a little to the right or left and try another tooth until the proper shape is obtained. Then file every other tooth, see cut No. 1; when one side is filed, reverse saw and attachment and adjust as in No. 2, and file the other teeth. For Rip Saws, place the file at right angles with the saw and file every tooth. Always keep the file as nearly horizontal as possible.

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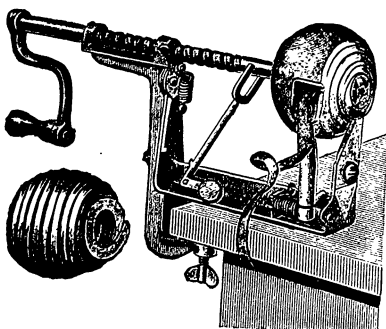
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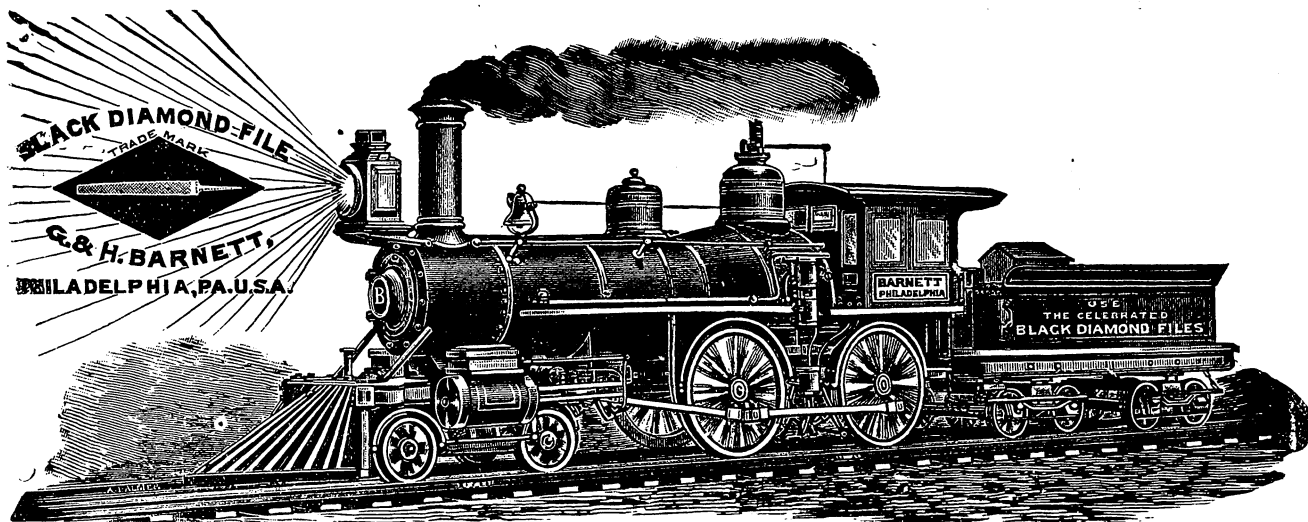


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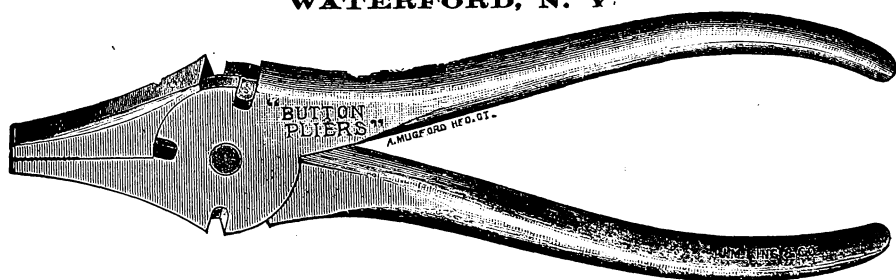
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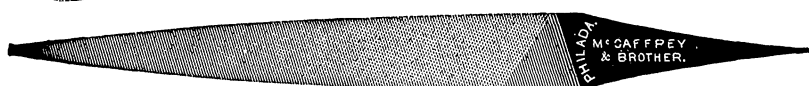
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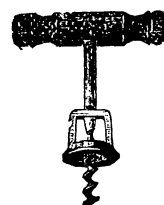
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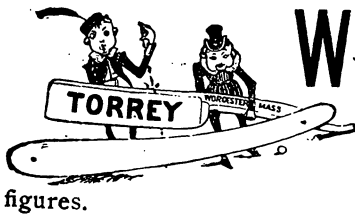
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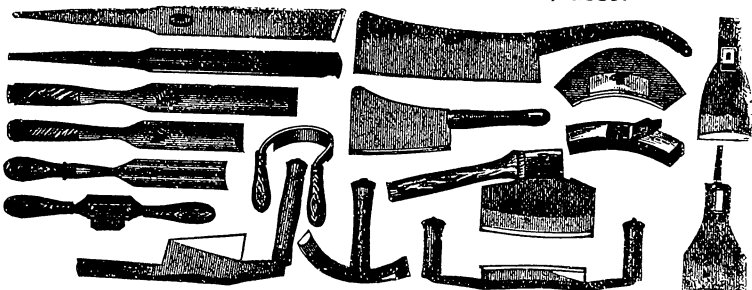
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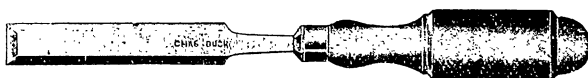
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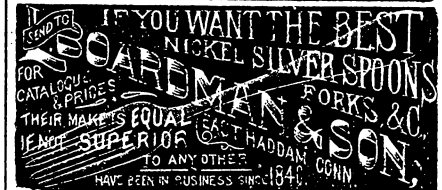
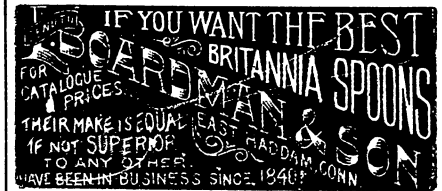
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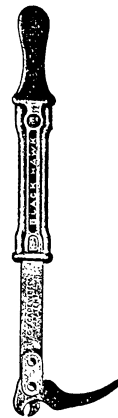
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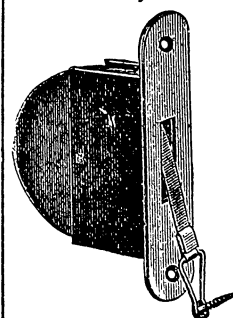
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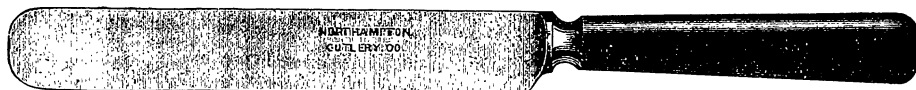
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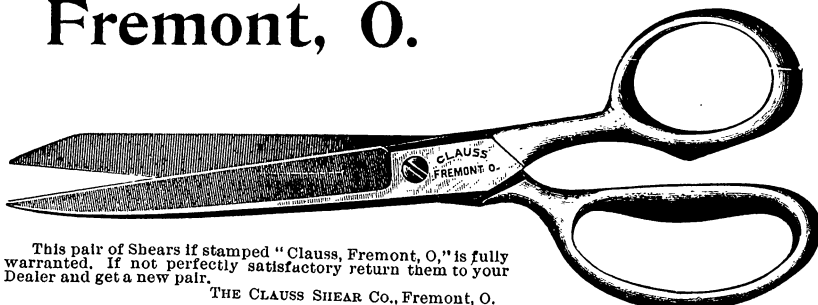


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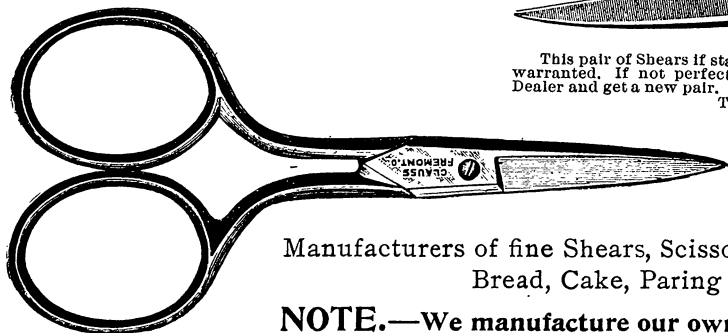
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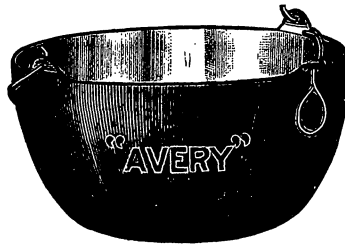
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Manufacturers of fine Shears, Scissors, Tinnerns' Snips and The Celebrated Clauss Bread, Cake, Paring and the Perfect Carving Knives.

NOTE.—We manufacture our own Scissors.



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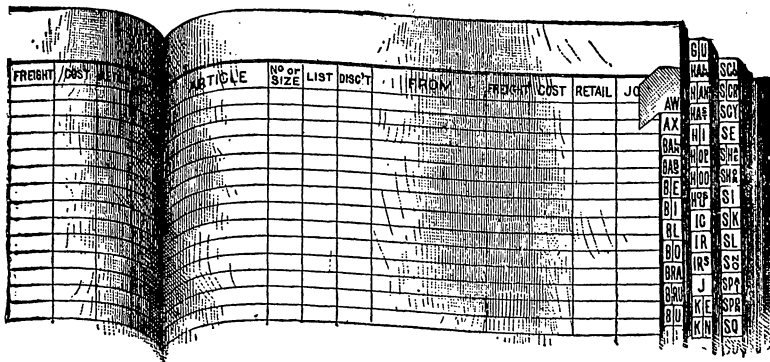
The Avery Stamping Co.,
Cleveland, Ohio.



This is a fac-simile of the label on my VULCAN TOOL CO. brand of HATCHETS; a brand for which I have a regular trade in some sections, but to those who have not "caught on"—dealers who are handling an outside brand—I offer a limited quantity at a very low price. Inquiries for price solicited.
FAYETTE R. PLUMB, Philadelphia.

The Iron Age Hardware Price Book E.

SECOND EDITION, REVISED AND ENLARGED, WITH MULTIPLE INDEX (Patent Pending).



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Fac-Simile of Indexing.

SIZE.—The book is 7 x 10 inches (much larger than Price Books A, B, C, or D), 350 pages.
PAPER.—The paper is the celebrated Crane's heavy ledger paper, tough and strong, permitting frequent changes and erasures.
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INDEX.—By means of the arrangement shown in the cut the index applies to every page (except Supplement) and permits reference to any article at a single motion. This greatly facilitates the use of the book, avoiding the troublesome turning from page to page which is necessary in connection with other Price Books. It has been prepared with great care, and it is believed that it provides a place for every article in the Hardware line.
ARRANGEMENT.—The book is arranged to keep a complete record of prices on a single page, the width giving sufficient room.
SUPPLEMENT.—A 40-page Supplement is provided to give room for supplemental quotations, memoranda, tables, &c.

THIS BOOK IS ISSUED IN ONLY ONE EDITION, PRICE, \$5.00.

Advantages of Multiple Index Price Book.

A SPECIAL feature of the books is the arrangement of the index characters, which, instead of being alphabetical, are arranged with special reference to the classification of Hardware goods, each index character giving the first two or three letters of the names of Hardware articles as shown above. The ease and convenience with which the books can be used is indicated in the following examples, taken from Book F:

For Augers,	turn to	AU	For Chisels,	turn to	CH	For Iron,	turn to	IRO
" Parers, Apple	"	PAR	" Cutlery,	"	CUT	" Irons,	"	IR'S
" Saws,	"	SAW	" Cartridges,	"	CAR	" Shovels,	"	SHO
" Pumps,	"	PUM	" Rules,	"	RUL	" Grindstones,	"	GRI
" Bits,	"	BIT	" Locks,	"	LO	" Stones,	"	STO

Special care has been taken to make the classification as indicated in the index correct and comprehensive, making provision for all Hardware articles and giving sufficient space for the keeping and recording of prices. It is thought that every strictly Hardware article has its first two or three letters given, thus permitting immediate reference to it by a single motion.

It is, however, obvious if any articles are not directly designated by the index characters, that the index, being alphabetical in its arrangement, indicates the place where quotations on such articles should be recorded. The supplement, however, may be found useful for quotations on any outside goods which the Hardwareman may desire to keep prices on, while at the same time it may be used if necessary for any overflow of matter from the preceding pages, or to contain list prices or other matter relating to goods.

Hardware Classification.—A pamphlet containing a classification of the leading Hardware articles is furnished with the price books.
Standard Lists.—In connection with these price books a set of The Iron Age STANDARD HARDWARE LISTS can be used with great advantage. Price 25 cents.

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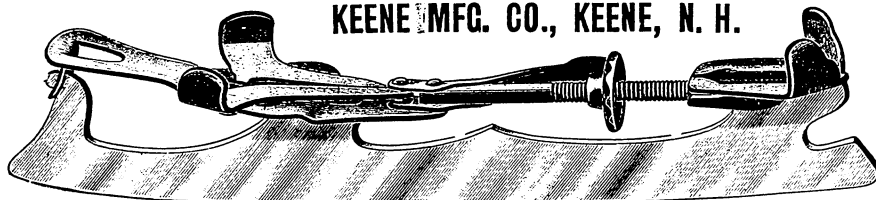


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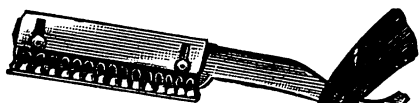
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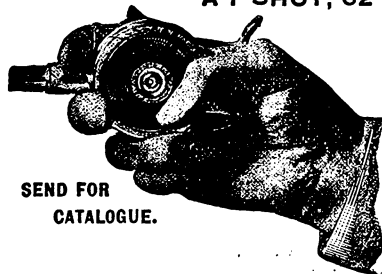


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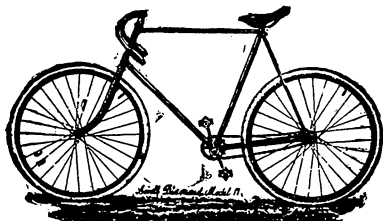
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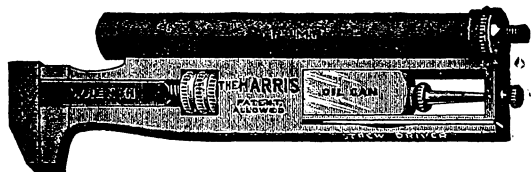
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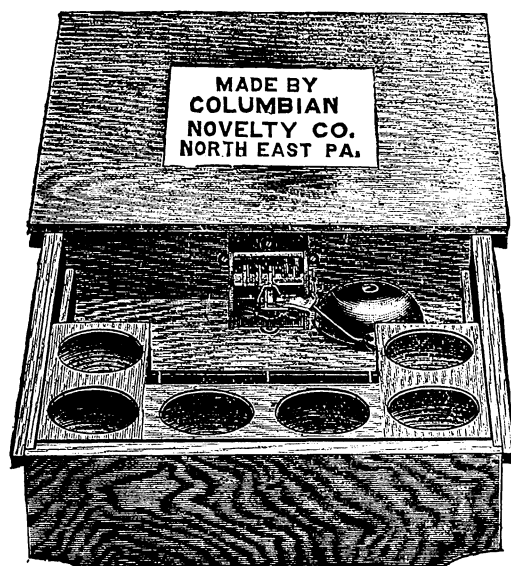


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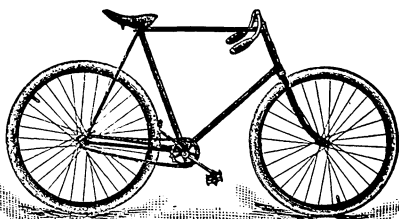
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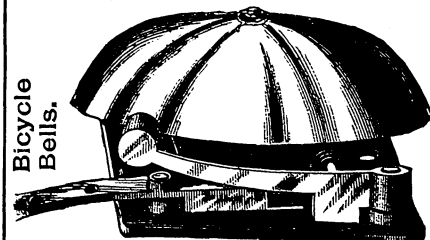
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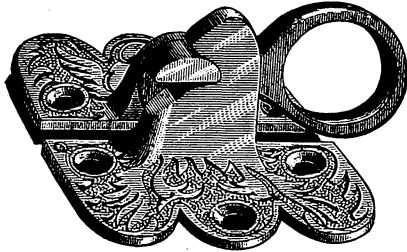
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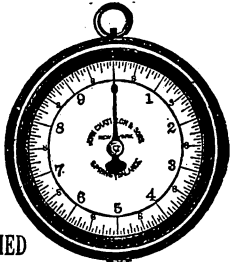
Have rapidly supplanted all others.
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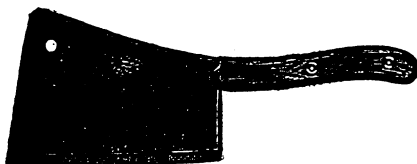
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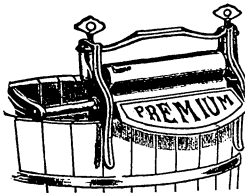


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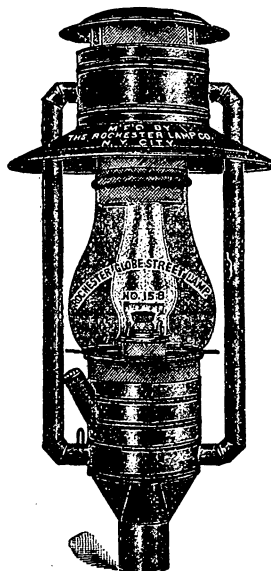
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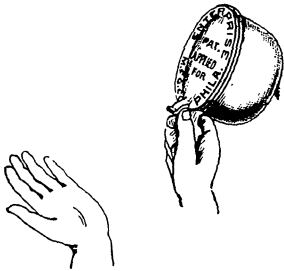


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For Making Snow Balls, Iced Drinks, &c.
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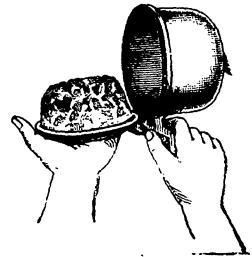
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No. 33,
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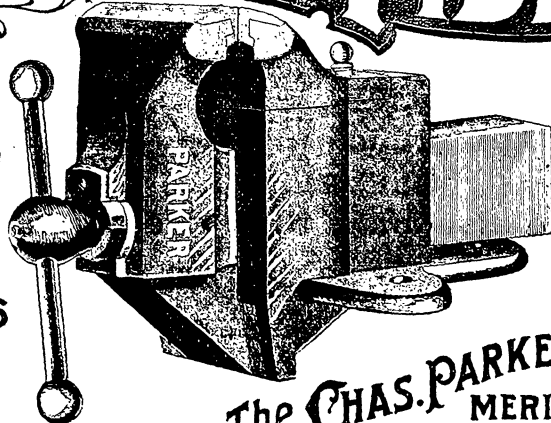


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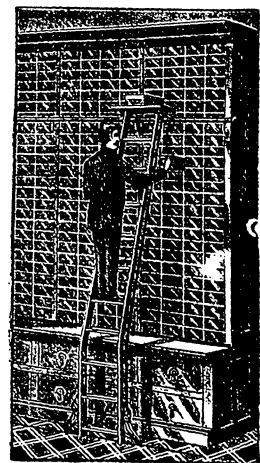


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THE Bicycle Step Ladder.

Especially adapted for
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NEATEST,
SIMPLEST,
EASIEST OPERATED,
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Highest Award World's Fair.

WRITE US.

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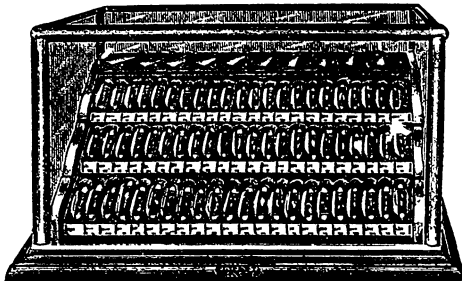
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For several weeks past we have sought an introduction to you by showing you each week cuts and description of the

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We can utter no commendation for these cases which could be overdrawn, they are exactly what every enterprising hardware man needs; what he wants; what he can ill afford to do without; what he must have to make his cutlery trade the easiest handled and produce the most satisfactory results. We have at great expense perfected arrangements by which we can ship 20,000 per annum. We have important cities throughout the cognizing their superior merits, when they assist the retail dealer themselves, **WILL PRE-COST, except freight**, one handle their brands of cutlery the drummer from whom you member that our number two pocket knives with two dozen This is our popular case. Look out for a big fall trade, and prepare to reap a golden harvest of shining shekels by displaying your cutlery in the greatest labor-saving and money-making device ever offered the hardware trade. For further information, descriptive circulars, &c., apply to your jobber or write us direct. Yours for a big trade,

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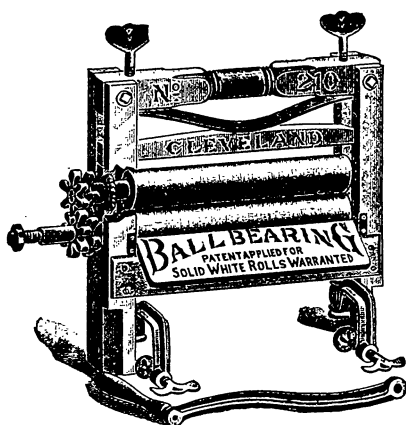
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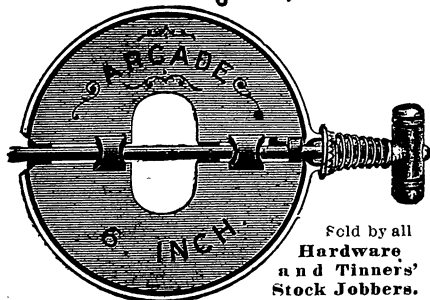
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We also make High Grade Bicycles.

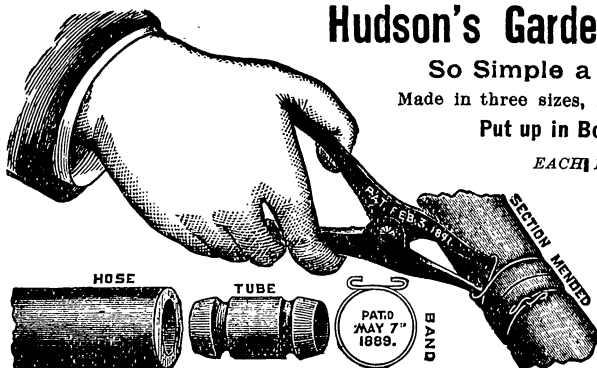
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Made in three sizes, for 1/2 in., 3/4 in. and 1 in. hose.

Put up in Boxes for Family use.

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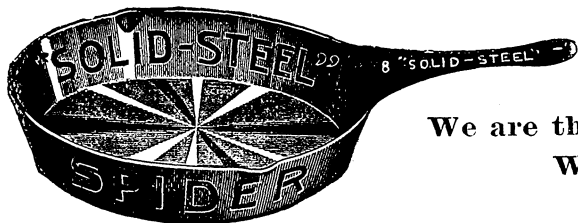
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Sells readily at 75 cents.
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No Seams, no Rivets in "Solid-Steel" Ware.

We are the leaders in Steel Hollow
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We do Light and Heavy Stamping and Blanking. Also build Dies and Stamping Machinery.

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that is put up in bundles
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feet, or on reels of 5000
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the most satisfactory Box
Strap on the market.

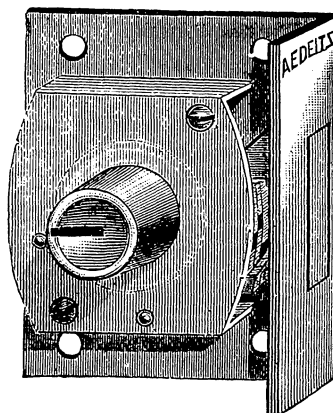
**The DeHaven
Mfg. Co.,**

50-54 Columbia Heights,
BROOKLYN, N. Y.



Pat. Dec. 13, 1887.

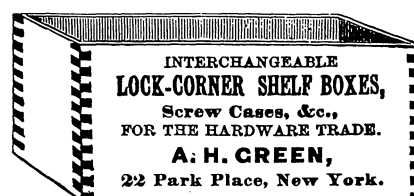
A. E. DEITZ



No. 51 Lock.

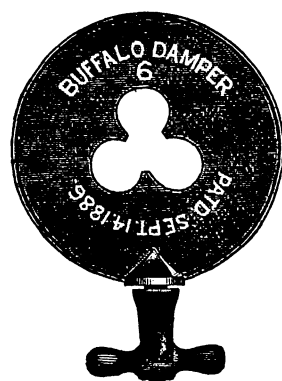
J. C. McCARTY & CO., Agents,
97 Chambers and 81 Reade Sts., New York.

Factory, **BROOKLYN, E. D., N. Y.**



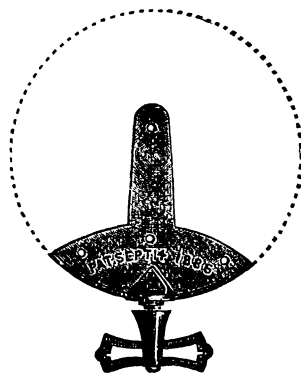
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**SAVES
TIME AND TEMPER.
SIMPLE,
SINGLE BEARING,
EASILY PUT IN.
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THE BUFFALO DAMPER CLIP.

**THE BUFFALO DAMPER CLIP IS
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All DAMPERS or DAMPER CLIPS supplied with wood or metal handles, as desired.

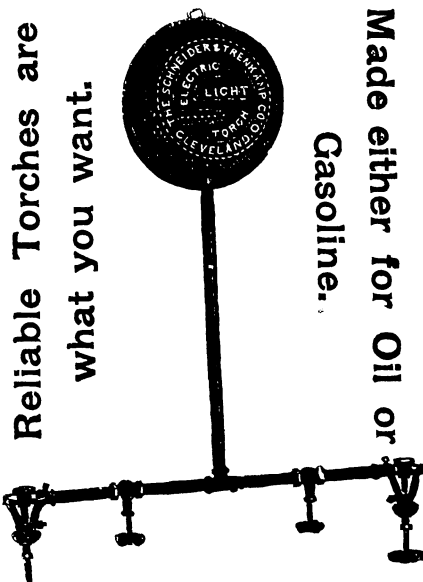
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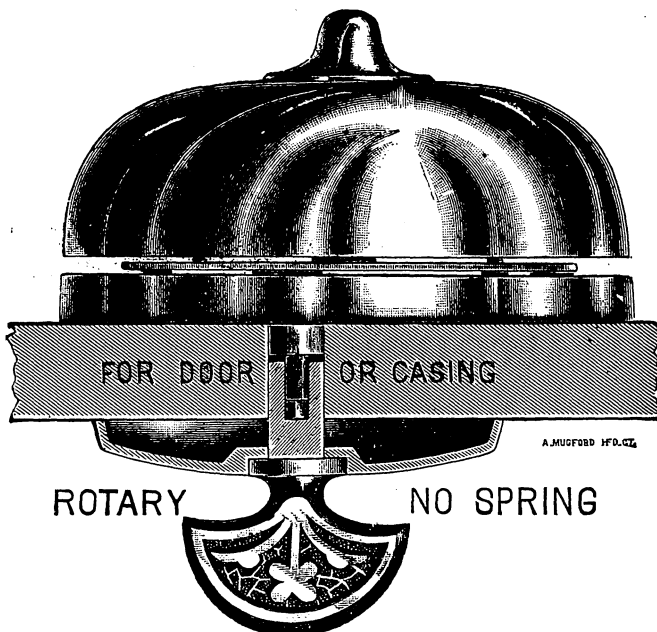
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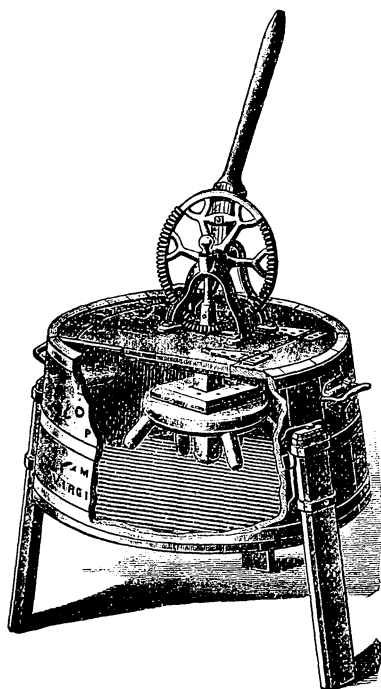
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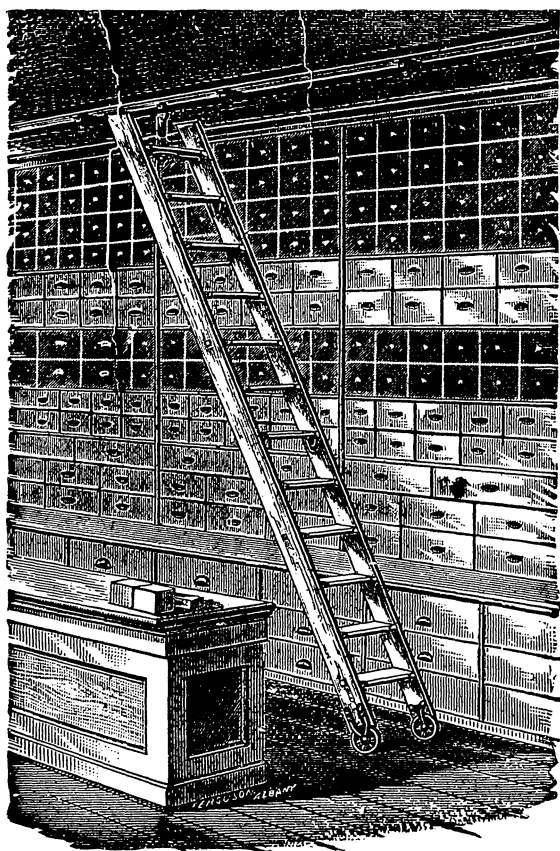
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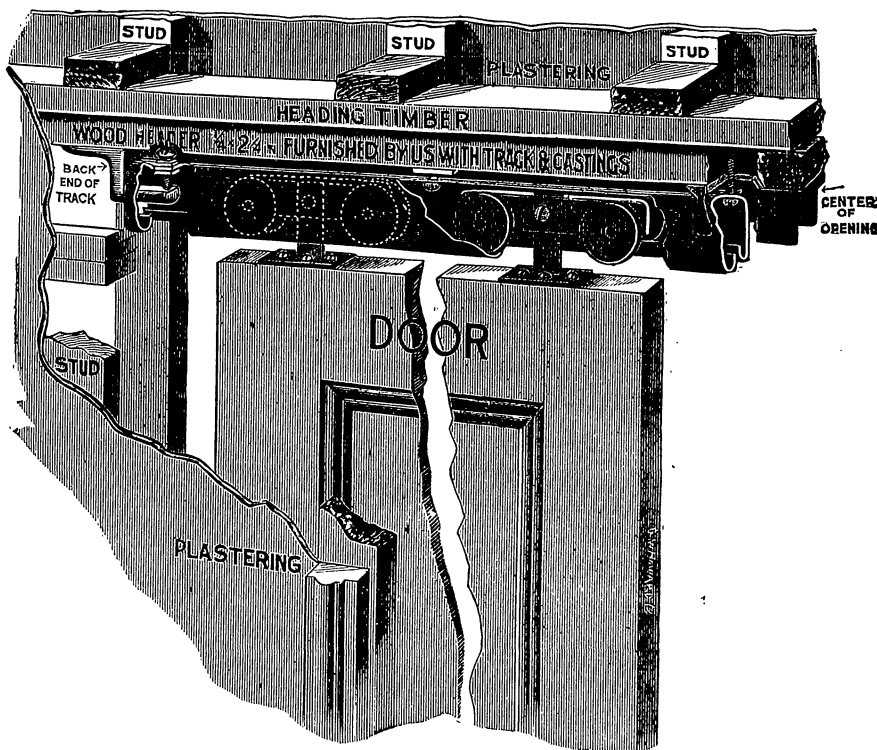
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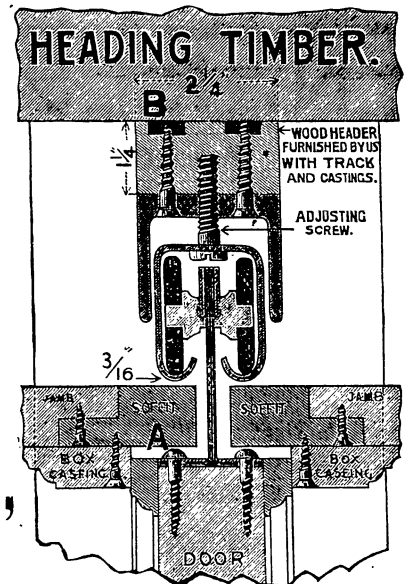
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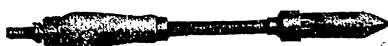
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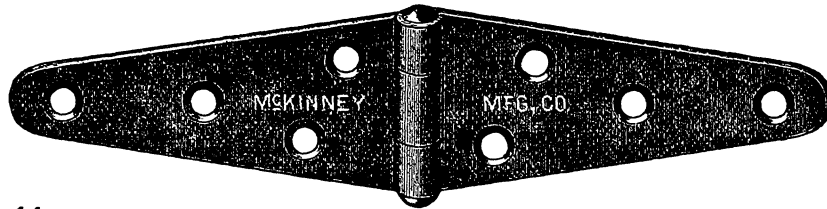
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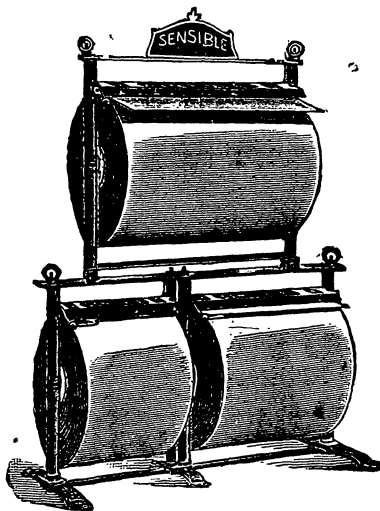


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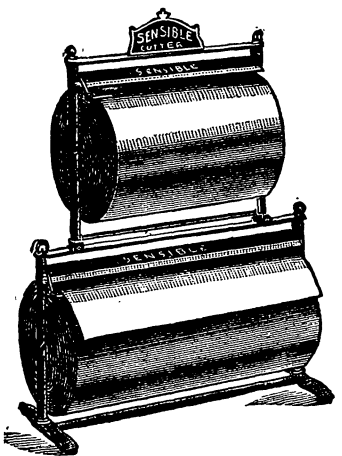
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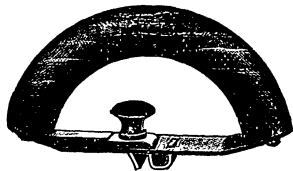


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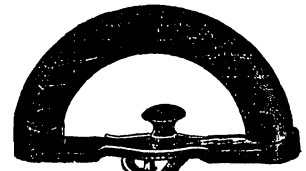


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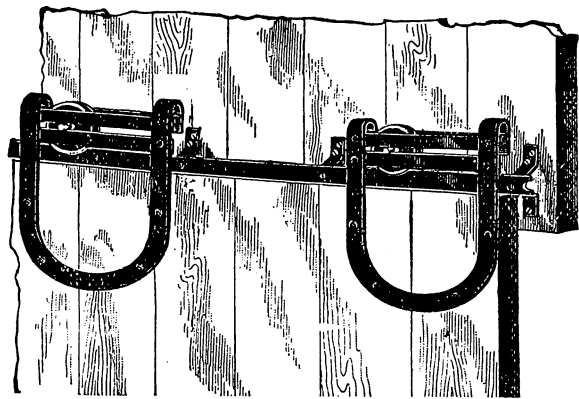
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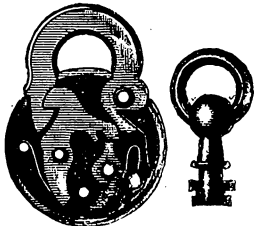
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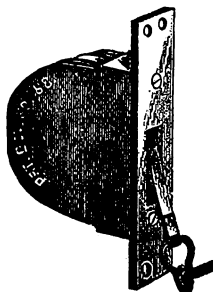
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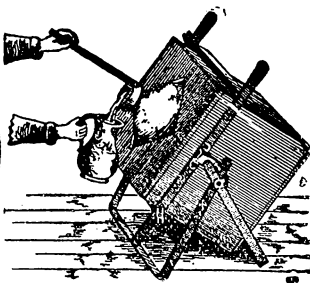
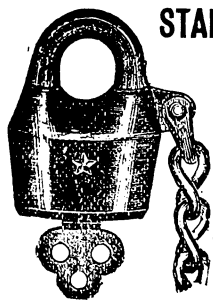
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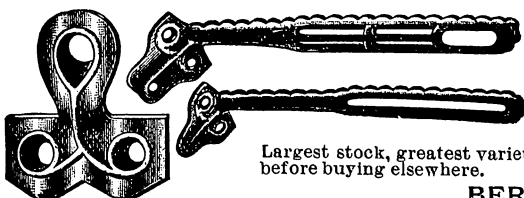
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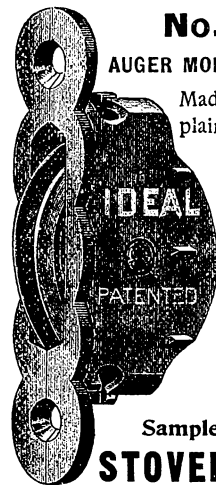
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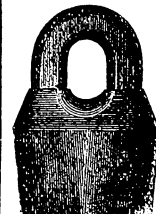
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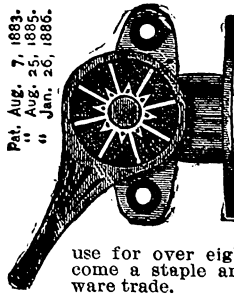
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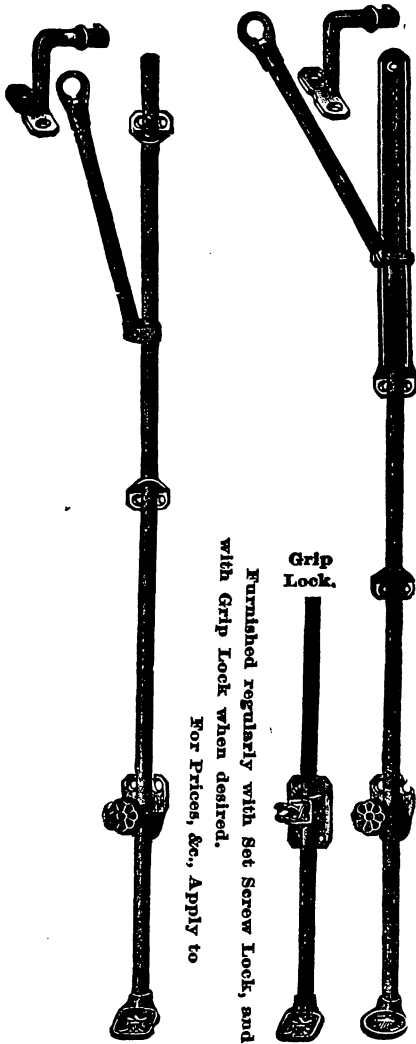
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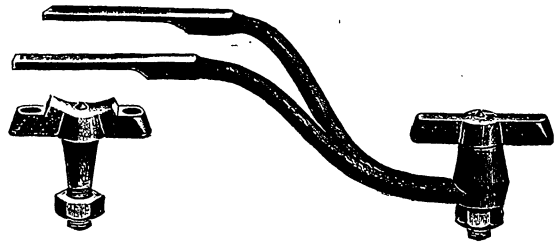
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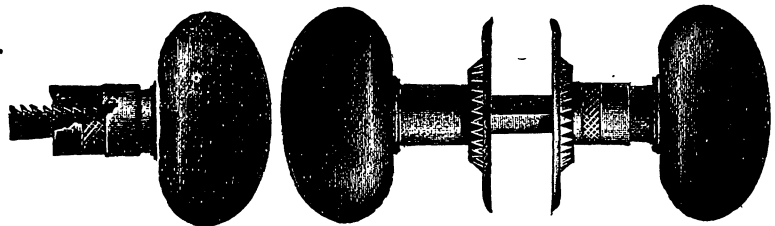
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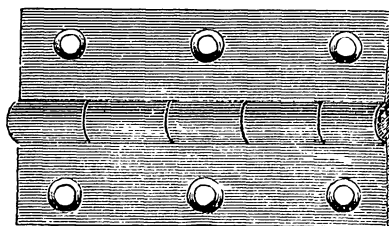
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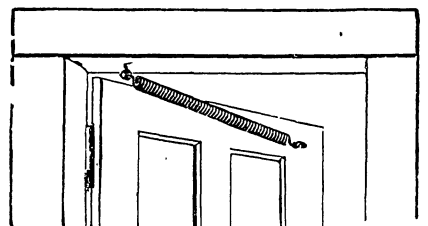
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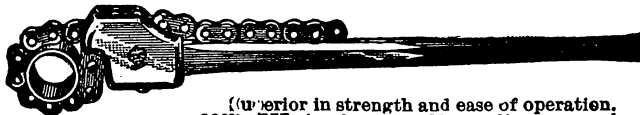
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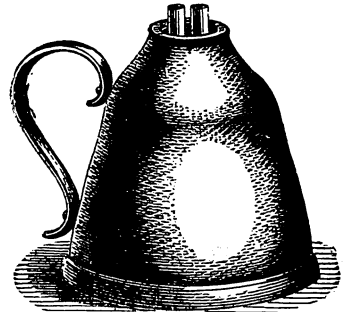
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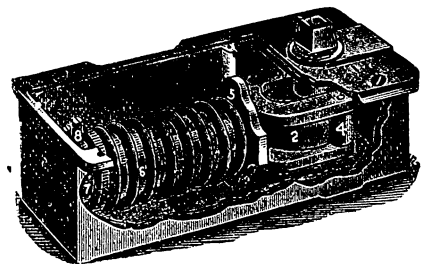
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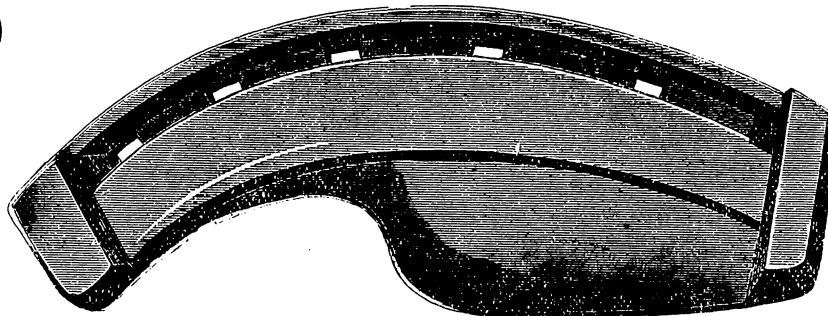
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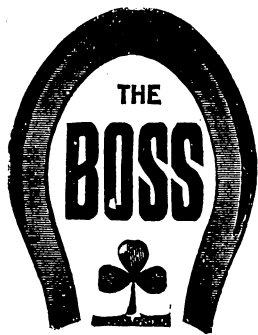
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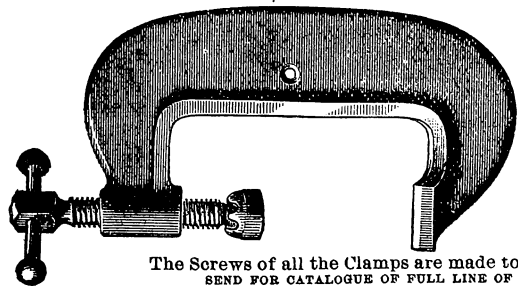
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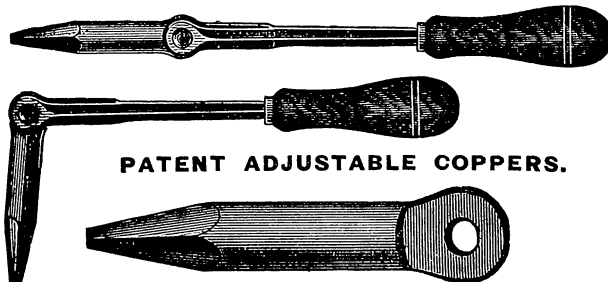
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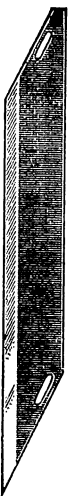
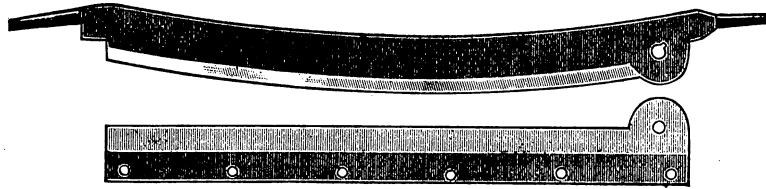
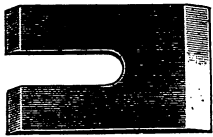
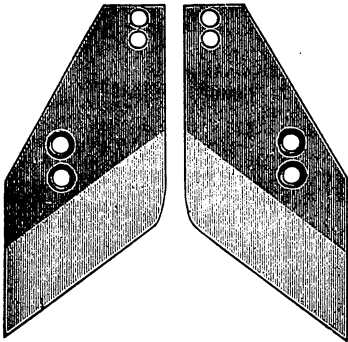
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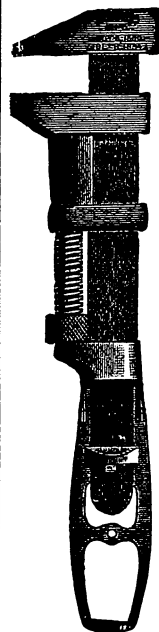
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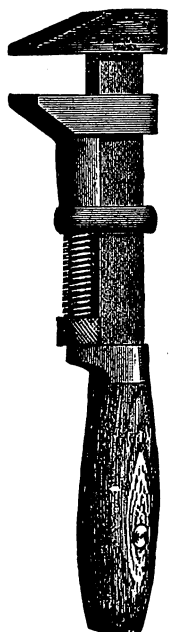
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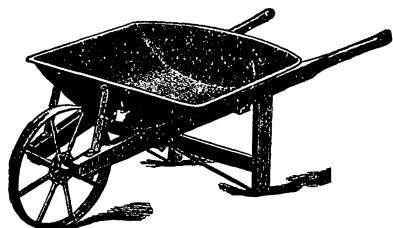
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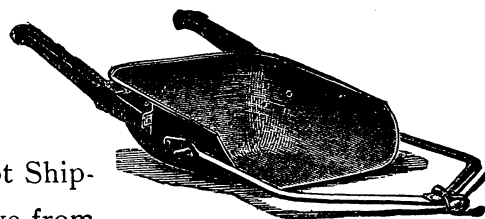
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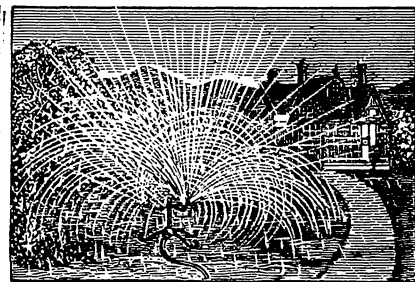
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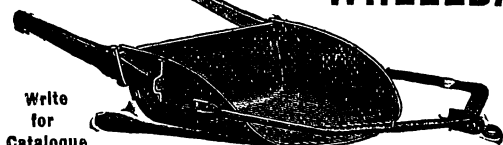
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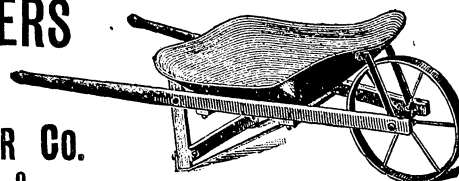
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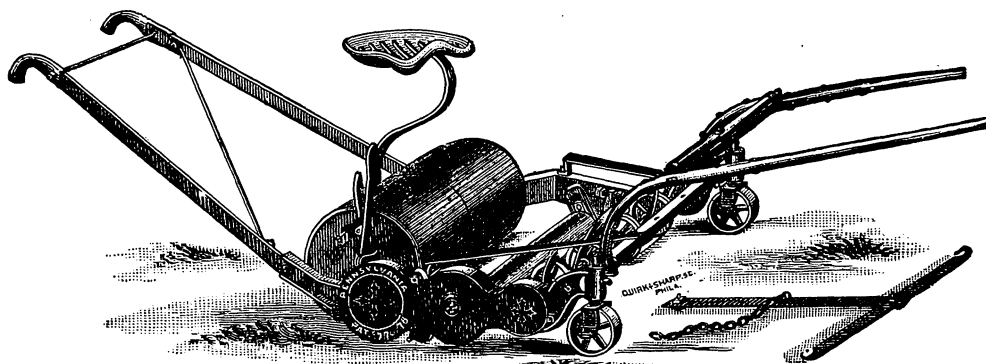


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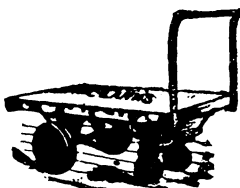
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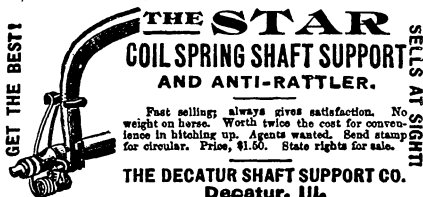
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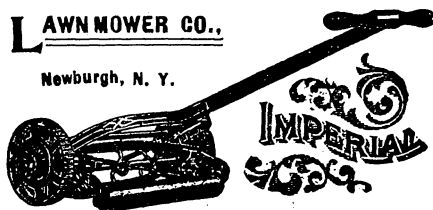
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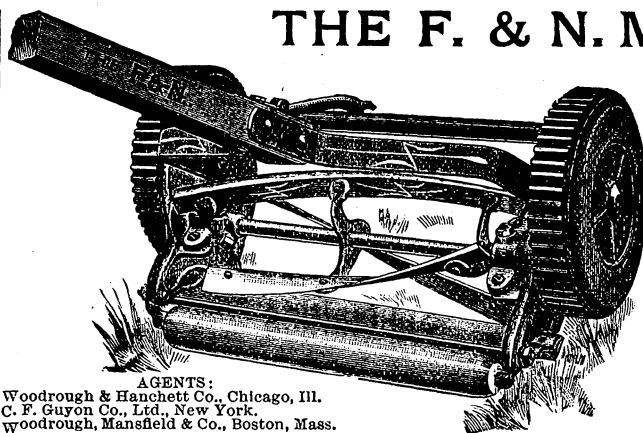
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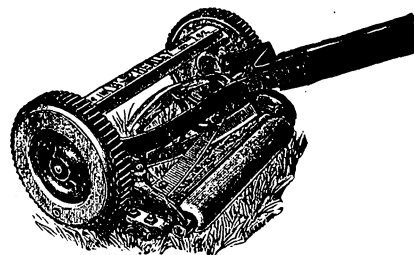
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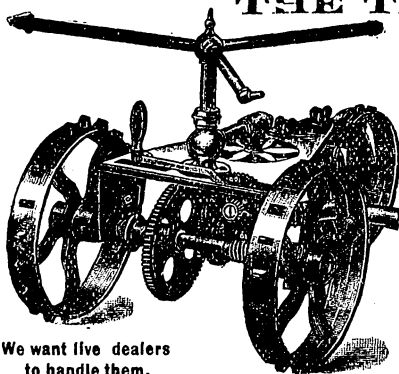
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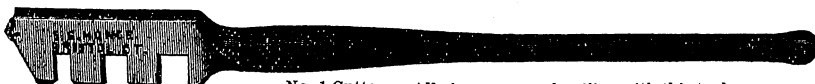
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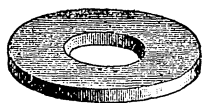
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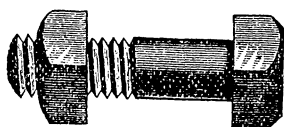
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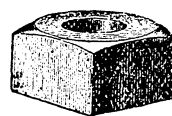
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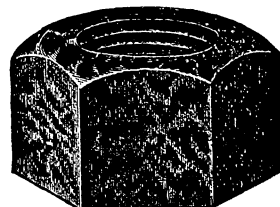


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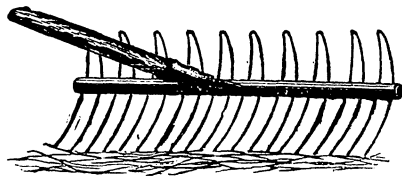
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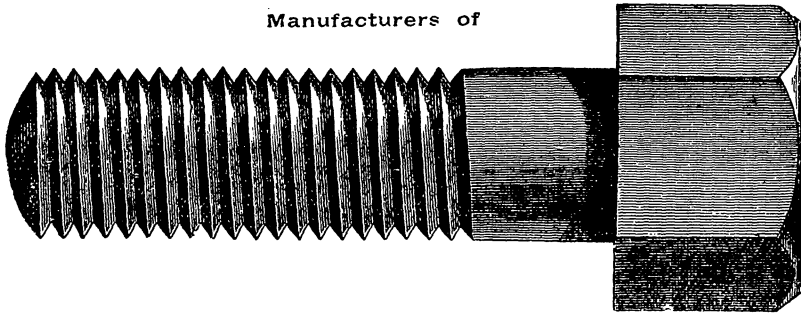
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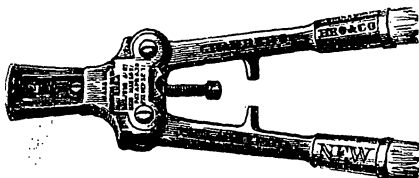
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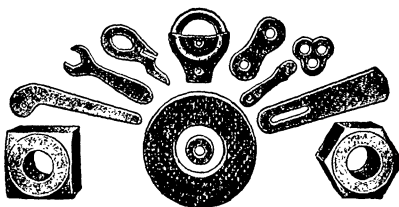
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Rhode Island Perkins Horse Shoe Co., Providence.
Shoenberger & Co., Pittsburgh, Pa.
Standard Horse Shoe Co., Boston, Mass.**Hose Menders.**

Hudson, C. E. & Co., Leominster, Mass.

Hose.

N. Y. Belting & Packing Co., Ltd., 15 Park Row, N. Y.

Hydrants, &c.

McLean, John, 286 & 298 Monroe, N. Y.

Hydraulic Forging.

U. S. Projectile Co., Brooklyn, N. Y.

Hydraulic Jacks.Dudgeon, Richard, 24 Columbia, N. Y.
McCoy, Jos. F. Co., 26 Warren St., N. Y.**Ice Cream Freezers.**Packer, C. W., Philadelphia, Pa.
White Mountain Freezer Co., Nashua, N. H.**Injectors.**Eynon-Evans Mfg. Co., Philadelphia, Pa.
Jenkins Bros., New York.**Insurance, Boiler.**

Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.

Iron and Steel, Swedish.Lundberg, Gustaf, Boston, Mass.
Milne, A. & Co., 1 Broadway, N. Y.**Iron Commission Brokers.**Butze, Adolph, St. Louis, Mo.
Corning, Edw. & Co., 29 B'way, N. Y.
Cotton, Barclay W. & Co., Phila.
Etting, Edw. J., Philadelphia.
Hogan, John L. & Co., Philadelphia, Pa.
Hoffman, J. W. & Co., Philadelphia.
Levis, Henry & Co., Philadelphia.
Keeley, Jerome & Co., Philadelphia.
Lea, J. Tatum & Co., Philadelphia.
Mohr, J. J., 430 Walnut, Philadelphia.
Pilling & Crane, Philadelphia, Pa.
Wister, L. & R. & Co., Phila., Pa.**Iron Ore.**

Samuel, Frank, Philadelphia, Pa.

Iron, Merchants.Barns, C. K. & Co., Philadelphia, Pa.
Borden & Lovell, 70 West, N. Y.
Bussentut & Cunliffe, Philadelphia.
Corning, Edw. & Co., 29 B'way, N. Y.
Cox, Justice, Jr., Philadelphia.
Cotton, Barclay W. & Co., Phila.
Hoffman, J. W. & Co., Philadelphia.
Leonard, J., 446 West St., N. Y.
Nicolls, Wheeler & Co., Philadelphia.
Ogden & Wallace, 577 to 583 Greenwich St., N. Y.
Plerson & Co., 29 Broadway, N. Y.
Thomson, W. H. & Co., Phila., Pa.
Wallace, Wm. H. & Co., 66 B'way, N. Y.
Whitney, A. R. & Co., 17 B'way, N. Y.
Wilson, E. H. & Co., Philadelphia.**Iron, Importers.**Abbott, Wheelock & Co., N. Y. and Boston.
Lundberg, Gustaf, Boston, Mass.**Iron, Sheet, Manufacturers of.**Cambridge Iron & Steel Co., Cambridge, Ohio.
W. Dewees Wood Co., Lim., McKeesport, Pa.**Ironwork, Ornamental.**Barnum, E. T., Detroit, Mich.
Champion Iron Co., Kenton, O.
Ludlow-Saylor Wire Co., St. Louis, Mo.
The Van Dorn Iron Works Co., Cleveland, O.**Keys.**

Wollensak, J. F., Chicago, Ill.

Knife and Tool Grinders.

Tracy, A. J. Co., Ltd., 18 Cliff St., N. Y.

Ladles.

Whiting Fdy. Equipment Co., Chicago, Ill.

Lanterns.Rochester Lamp Co., 42 Park Place, New York.
Steam Gauge & Lantern Co., Syracuse, N. Y.**Lathes.**Dietz, Schumacher & Co., Cincinnati, O.
Draper Machine Tool Co., Worcester, Mass.
Harrington, E. Son & Co., Phila., Pa.
Johnson, Israel H., Jr., & Co., Philadelphia, Pa.
New Haven Mfg. Co., New Haven, Conn.
Sebastian Lathe Co., Cincinnati, O.
Seneca Falls Mfg. Co., Seneca Falls, N. Y.**Lathing, Expanded Metal.**

Chess Bros., Pittsburgh, Pa.

Lathing, Wire.Clinton Wire Cloth Co., Clinton, Mass.
J. Wire Cloth Co., Trenton, N. J.
Wright & Colton Wire Cloth Co., Worcester, Mass.**Lawn Mowers.**Blair Mfg. Co., Springfield, Mass.
Chadborn & Coldwell Mfg. Co., Newburg, N. Y.
Coldwell Lawn Mower Co., Newburg, N. Y.
F. & N. Mfg. Co., Richmond, Ind.
Henley, M. C., Richmond, Ind.
Supplee Hdwr. Co., Phila., Pa.**Lawn Rakes.**Gibbs Mfg. Co., Canton, Ohio.
Kohler, F. E. & Co., Canton, O.**Lawn Sprinklers.**Blair Mfg. Co., Springfield, Mass.
Ette & Henger Mfg. Co., St. Louis, Mo.
Graham, John H. & Co., 113 Chambers Street, N. Y.
McGowan, John H. Co., Cincinnati, O.
Portland Lawn Sprinkler Co., Portland, Me.**Letters and Figures, Metallic.**

White, A. A. & Co., Providence, R. I.

Letters, Paper.

Tablet & Ticket Co., Chicago, Ill.

Levels.

Richardson, C. F. & Son, Athol, Mass.

Locks and Knobs, Manufacturers of.Deitz, A. E., 97 Chambers, N. Y.
Reading Hdwr. Co., Reading, Pa.
Smith & Egge Mfg. Co., Bridgeport, Conn.
Yale & Towne Mfg. Co., Stamford, Conn.**Lubricants.**

Dixon, Jos., Crucible Co., Jersey City, N. J.

Machinery.Am. Tool Works, Cleveland, Ohio.
Ayer, H. C. & Gleason Co., Phila., Pa.
Barnes, W. F. & John, Rockford, Ill.
Bement, Miles & Co., Philadelphia, Pa.
Bigelow, C. E., 46 Dey, N. Y.
Bisnall & Keeler Mfg. Co., St. Louis.
Bliss, E. W. Co., Brooklyn, N. Y.
Bridgeport Mch. Tool Works, Bridgeport, Conn.
Briggs, Marvin, 12 Broadway, N. Y.
Carlin's Sons, Thos., Allegheny, Pa.
Clapp, Geo. M., agt., 74 Cortlandt, N. Y.
Detrick & Harvey Mch. Co., Baltimore, Md.
Dietz, Schumacher & Co., Cincinnati, Ohio.
Fitchburg Mch. Works, Fitchburg, Mass.
Garvin Mch. Co., Laight & Canal Sts.
Gould & Eberhardt, Newark, N. J.
Hamilton Mch. Tool Co., Hamilton, O.
Harrington, E. Son & Co., Phila., Pa.
Henderer, A. L., Wilmington, Del.
Hendey Machine Co., Torrington, Ct.
Hill, Clarke & Co., Boston, Mass.
Howard & Morse, 46 Fulton St., N. Y.
Johnson, Israel H., Jr., & Co., Phila.
Jones & Lamson Mch. Co., Springfield, Vt.
Lodge & Davis Mch. Tool Co., Cincinnati, O.
Lodge & Shipley Mch. Tool Co., Cincinnati, O.
McCabe, J. J., 68 Cortlandt, N. Y.
Machinists' Supply Co., Rochester, N. Y.
Manville, E. J., Mch. Co., Waterbury, Conn.
Newark Mch. Tool Wks., Newark, N. J.
New Haven Mfg. Co., New Haven, Ct.
New York Machinery Depot, 178 Broadway, New York.
Niles Tool Wks., 133 Liberty St., N. Y.
Pittsburgh Mfg. Co., Pittsburgh, Pa.

Place, Geo., 145 Broadway, N. Y.
 Poole, Robt. & Son Co., Baltimore, Md.
 Powell Planer Co., Worcester, Mass.
 Prentiss Tool & Supply Co., N. Y.
 Scranton Supply & Mfg. Co., Scranton, Pa.
 Seibert, J. M., Philadelphia, Pa.
 Sellers, Wm. & Co., Phila.
 Seyfer's Sons, L. F., Philadelphia, Pa.
 Sigourney Tool Co., Hartford, Conn.
 Steptoe, J. & Co., Cincinnati, O.
 Stow Flexible Shaft Co., Ltd., Phila.
 Toomey, Frank, Philadelphia, Pa.
 Walker Mfg. Co., Cleveland, O.
 Wetherill, Robert & Co., Chester, Pa.
 Wilson, W. A., Rochester, N. Y.

Machinery for Hardware Manufacturers.
 Adt. Jno. & Son, New Haven, Conn.

Machine Knives.

Loring, Coes & Co., Worcester, Mass.
 Simonds Mfg. Co., Pittsburg, Mass.
 New Britain Hdw. Mfg. Co., New Britain, Conn.

Machine Screws.

Bubbell, Harvey, Bridgeport, Ct.
 New Britain Hdw. Mfg. Co., New Britain, Conn.

Machine Tools.—See Machinery.

Machine Work.

Papping, J., 58th St. & 11th Ave., N. Y. City.

Machinists' Scales

Coffin & Leighton, Syracuse, N. Y.
 Starrett, L. S., Athol, Mass.

Machinists' Tools and Supplies.

King, J. M. & Co., Waterford, N. Y.
 Sellers, Wm. & Co., Inc., Phila.

Manufacturing Sites.

Chicago, Milwaukee & St. Paul R. R., Chicago, Ill.
 Harmon T. H., Lock Haven, Pa.

Measuring Tapes.

Keuffel & Esser Co., N. Y.

Meat Choppers.

Enterprise Mfg. Co., Philadelphia, Pa.

Meat Cutters.

North Bros. Mfg. Co., Philadelphia, Pa.

Mechanical Instruction.

Correspondence School of Mechanics, Scranton, Pa.

Metals.

Fearing, Wm. S., 100 Chambers, N. Y.
 Hendricks Bros., 49 Cliff, N. Y.

Metal Brokers.

American Metal Co., N. Y.

Metallurgists.

Britton, J. Blodgett, Phila., Pa.

Mining Knives.

Palmer Hdw. Mfg. Co., Troy, N. Y.

Mine Lamps.

Darby, Edw. & Sons, Phila., Pa.
 Leonard, B. E., Scranton, Pa.

Mining Screens.

Harrington & King Perforating Co., Chicago, Ill.
 Howard & Morse, 45 Fulton, N. Y.

Models, Makers of.

Franklin, H. H. Mfg. Co., Syracuse, N. Y.
 Ideal Machine Works, Hartford, Conn.

Molding Sand.

Obermayer, S. Co., Cincinnati, O.

Money Drawers.

Columbian Novelty Co., North East, Penna.

Motors, Water and Electric.

Bogliano Mfg. Co., Baltimore, Md.
 C. & C. Electric Co., 402 and 404 Greenwich St., N. Y.
 Dallett, Thomas H. & Co., Phila., Pa.

Nail Machinery.

Pittsburgh Mfg. Co., Pittsburgh, Pa.

Nail and Tack Pullers.

Am. Specialty Co., Hartford, Conn.
 Scranton & Co., New Haven, Conn.

Nails (Cut) and Spikes.

Borden & Lovell, 70 West, N. Y.
 Pottstown Iron Co., Pottstown, Pa.
 Riverside Iron Wks., Wheeling, W. Va.

Nickel Plating.

Rhodes, L. E. Co., Hartford, Conn.

Norway Shapes, Rollers of.

Rorland, William & Harvey, Frankford, Philadelphia.

Novelty Manufacturers.

Franklin, H. H. Mfg. Co., Syracuse, N. Y.
 Ideal Machine Works, Hartford, Conn.

Nut Machines.

Dunham Nut Co., Unionville, Ct.

Nuts, Bolts, &c., Makers of.

American Bolt Co., Lowell, Mass.
 American Screw Co., Providence, R. I.
 Blake & Johnson, Waterbury, Conn.
 Dunham Nut Co., Unionville, Conn.
 Haskell, Wm. H. Co., Pawtucket, R. I.
 Mt. Carmel Bolt Co., Mt. Carmel, Conn.
 Pennsylvania Bolt & Nut Co., Lebanon, Pa.
 Port Chester Bolt & Nut Co., Port Chester, N. Y.
 Russell, Burdall & Ward, Port Chester, N. Y.
 Sternbergh, J. H. & Son, Reading, Pa.
 Wilson, J. Fred., Worcester, Mass.
 Wm. H. Haskell Co., Pawtucket, R. I.

Oilers.

Wilnot & Hobbs Mfg. Co., Bridgeport, Conn.

Oil Stones.

Pike Mfg. Co., Pike Station, N. H.

Ores.

Wister, Francis, Philadelphia, Pa.

Ox Shoes.

Scranton Forging Co., Scranton, Pa.

Packing.

Morrison, Robert, St. Louis, Mo.
 N. Y. Belting & Packing Co., Ltd., N. Y.

Padlocks.

Ames Sword Co., Chicopee, Mass.
 Frail, E. T., Lancaster, Pa.
 Wolf, W. & L., Phila., Pa.

Pills.

Richmond Cedar Wks., Richmond, Va.

Paint Burners.

Daugler Stove & Mfg. Co., Cleveland, Ohio.

Paint Cans.

Wilnot & Hobbs Mfg. Co., Bridgeport, Conn.

Pants Stretcher.

Covert Mfg. Co., West Troy, N. Y.

Patent Solicitors.

Butler, C. N., Phila., Pa.
 Jenner, H. W. T., Washington, D. C.
 Howson & Howson, Philadelphia and Washington.
 Stocking, E. B., Washington, D. C.

Pattern Letters.

Wells, Heber, 157 William St., N. Y.

Perforated Metal.

Clinton Wire Cloth Co., Clinton, Mass.
 Harrington & King Perforating Co., Chicago, Ill.
 Hendrick Mfg. Co., Ltd., Carbondale, Pa.

Phosphor Bronze.

Phosphor Bronze Smelting Co., Limited, Philadelphia.

Phosphor Tin.

Crescent Phosphorized Metal Co., Philadelphia, Pa.
 Halk & Naumann, 516 Pearl, N. Y.

Picks and Mattocks.

Piunb, Fayette R., Philadelphia, Pa.

Pig Iron.

Houston, C. B. & Co., Philadelphia, Pa.
 Montour Iron & Steel Co., Danville, Pa.
 Taylor & Co., 45 Wall, N. Y.
 Pilling & Crane, Philadelphia, Pa.
 Samuel, Frank, Philadelphia, Pa.

Pig Iron Storage.

Am. Pig Iron Storage Warrant Co., 44 Wall, N. Y.

Pile Drivers.

Vulcan Iron Works, Chicago, Ill.

Pipe, Bent.

National Pipe Bending Co., New Haven, Conn.

Pipe Cutting and Threading Machines.

Armstrong Mfg. Co., Bridgeport, Conn.
 Bignall & Keeler Mfg. Co., St. Louis, Mo.
 Detrick & Harvey Mch. Co., Baltimore, Md.
 Merrill Mfg. Co., Toledo, O.
 New Coast, Henry B. & Co., Phila.
 Saunders' Sons, D., Yonkers, N. Y.
 Walworth Mfg. Co., Boston, Mass.

Pipe Grips.

Prentiss Vise Co., 44 Barclay, N. Y.

Pipes, Fittings, &c., Makers of.

McNab & Hartin Mfg. Co., N. Y.

Pipe, Water and Gas, Makers of.

Donaldson Iron Co., Emaus, Pa.
 Riverside Iron Works, Wheeling, W. Va.
 Wood, R. D. & Co., Philadelphia, Pa.

Plane Irons, Manufacturers of.

Buck Bros., Millbury, Mass.
 Buck, Chas., Millbury, Mass.

Planers.

Detrick & Harvey Mch. Co., Baltimore, Md.
 New Haven Mfg. Co., New Haven, Conn.
 Powell Planer Co., Worcester, Mass.
 Wilson, W. A., Worcester, Mass.

Planes, Manufacturers of.

Stanley Rule & Level Co., N. Y.

Plated Ware.

Boardman, L. & Son, New Haddam, Ct.
 Holmes & Edwards Silver Co., Bridgeport, Conn.
 Rogers, Wm. Mfg. Co., Hartford, Ct.

Plate, Iron and Steel, Mfrs. of.

Atma-Standard Iron & Steel Co., Bridgeport, O.
 Lukens Iron & Steel Co., Coatesville, Pa.
 Mahoning Valley Iron Co., Youngstown, Ohio.
 Moorhead-McLean Co., Pittsburgh, Pa.
 McIlvain & Sons, Reading, Pa.
 Pottstown Iron Co., Pottstown, Pa.
 Pottsville Iron & Steel Co., Pottsville, Pa.
 Singer, Nimick & Co., Pittsburgh, Pa.
 The Mahoning Valley Iron Co., Youngstown, O.
 Wood, Alan Co., Philadelphia.

Plating, Nickel, Brass and Silver.

Wilnot & Hobbs Mfg. Co., Bridgeport, Conn.

Polishing Machines.

Watson & Stillman, 204 E. 43d, N. Y.

Post Hole Diggers.

Gibbs Mfg. Co., Canton, Ohio.
 Kohler, F. E. & Co., Canton, O.

Poultry Nettings.

Barnum, E. T., Detroit, Mich.
 Gilbert & Bennett Mfg. Co., 42 Cliff St., N. Y.
 N. J. Wire Cloth Co., Trenton, N. J.
 "Silver Finish."
 Tyle Wire Works Co., W. S., Cleveland, O.
 Wright & Colton Wire Cloth Co., Worcester, Mass.

Powder.

Lafin & Rand Powder Co., 29 Murray.
 New York Powder Co., 62 Liberty St., N. Y.

Power Hack Saws.

Millers Falls Co., 93 Reade St., N. Y.

Power Hammers.

Dienelt & Eisenhardt, Philadelphia.
 Dupont Mfg. Co., St. Johnsbury, Vt.
 Jenkins & Lingle, Bellefonte, Pa.
 Long & Allstatter Co., Hamilton, Ohio.
 Miner & Peck Mfg. Co., New Haven, Conn.
 Scranton & Co., New Haven, Conn.

Power Transmitting Machinery.

Dodge Mfg. Co., Mishawaka, Ind.

Presses, Dies, &c.

E. W. Bliss Co., Brooklyn, N. Y.
 Crosby, G. A. & Co., Chicago, Ill.
 Stark Mch. & Tool Co., Buffalo, N. Y.
 Stiles & Parker Press Co., Brooklyn, N. Y.
 Waterbury Mch. Co., Waterbury, Ct.

Presses, Power, Makers of.

Bliss, E. W. Co., Brooklyn, N. Y.
 Manville, E. J. Mch. Co., Waterbury, Ct.
 Merriman, A. H., Meriden, Conn.
 Stark Mch. & Tool Co., Buffalo, N. Y.
 Waterbury Farrel Foundry & Machine Co., Waterbury, Conn.

Printers.

Griffith, Axtell & Cady Co., Holyoke, Mass.

Pruning Knives.

Gibbs Mfg. Co., Canton, O.

Pulleys.

Brown, A. & F., 17 Dey St., N. Y.
 Dodge Mfg. Co., Mishawaka, Ind.
 Keystone Clutch Mch. Wks., Phila., Pa.

Pulverizing Mills.

Bradley Fertilizer Co., Boston, Mass.

Pumping Machinery.

Dean Bros. Steam Pump Works, Indianapolis, Ind.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Hooker-Colville Steam Pump Co., St. Louis, Mo.
 McGowan, J. H. & Co., Cincinnati, O.
 Maslin, J. & Son, Jersey City, N. J.
 Norwalk Iron Works Co., So. Norwalk, Conn.
 Southwark Fdy. & Mch. Co., Phila., Pa.
 Valley Pump Works, Easthampton, Mass.
 Worthington, Henry R., 86 and 88 Liberty St., N. Y.

Pumps, Makers of.

Deming Co., Salem, O.
 Douglas, W. & E., Middletown, Conn.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Myers, F. E. & Bro., Ashland, O.
 Red Jacket Mfg. Co., Davenport, Iowa.

Punches.

Richards, I. P., Providence, R. I.

Punches and Shears, Hand and Power.

E. W. Bliss Co., Brooklyn, N. Y.
 Crosby, G. A. & Co., Chicago, Ill.
 Brender, A. L., Wilmington, Del.
 Long & Allstatter Co., Hamilton, Ohio.
 Stark Mch. & Tool Co., Buffalo, N. Y.
 Stiles & Parker Press Co., Brooklyn, N. Y.
 Waterbury Farrel Foundry & Machine Co., Waterbury, Conn.
 Watson & Stillman, 204 E. 43d, N. Y.

Rails, Old and New.

Perry, W. H. & Co., Providence, R. I.

Rat and Mouse Traps.

Estey, W. S., 65 Fulton, N. Y.

Razor Guard.

Murphy, P. D., Lockport, N. Y.

Razor Sharpener.

Dame, Stoddard & Kendall, Boston, Mass.

Razors, Manufacturers of.

Torrey, J. R. Razor Co., Worcester, Mass.

Reels.

Henryx, A. B. Co., New Haven, Conn.

Refrigerator Door Fasteners.

Conroy, P. J. & Co., Philadelphia.

Rivets.

Blake & Johnson, Waterbury, Conn.
 Burden Rivet Co., Muncie, Ind.
 Burden Iron Co., Troy, N. Y.
 Clark & Cowles, Plainville, Conn.
 Cobb & Drew, Plymouth, Mass.
 Sternbergh, J. H. & Son, Reading, Pa.
 Townsend, W. P. & Co., New Brighton, Pa.

Riveting Machines.

Adt. Jno. & Sons, New Haven, Conn.

Rolling Mill Machinery.

Birmingham Iron Fdry, Birmingham, Conn.
 Booth, The Lord Co., Youngstown, O.
 Leeburg Foundry & Mch. Co., Pittsburgh, Pa.
 Morgan Construction Co., Worcester, Mass.
 Robinson-Rea Mfg. Co., Pittsburgh.
 Totten & Hogg Iron and Steel Fdry Co., Pittsburgh, Pa.
 Trethewey Mfg. Co., Pittsburgh, Pa.
 Waterbury Farrel Foundry & Mch. Co., Waterbury, Conn.

Rolls, Chilled, Sand and Steel.

Birmingham Iron Foundry, Birmingham, Conn.
 Booth, The Lord Co., Youngstown, O.
 East Chicago Fdry Co., Chicago, Ill.
 Garrison, A. Fdry. Co., Pittsburgh, Pa.
 Robinson-Rea Mfg. Co., Pittsburgh, Pa.
 Seaman, Steeth & Black, Pittsburgh.
 Totten & Hogg Iron and Steel Fdry Co., Pittsburgh, Pa.

Roll Paper Holders.

Streeter, N. R. & Co., Groton, N. Y.

Roofing.

Cambridge Roofing Co., Cambridge, O.
 Cincinnati Corrugating Co., Piqua, O.
 Kanneberg Roofing Co., Canton, O.
 N. Y. Iron Roofing & Corrugating Co., Jersey City, N. J.

Rope and Web Goods.

Covert Mfg. Co., West Troy, N. Y.
 Covert's Saddlery Wks., Farmer, N. Y.

Rope Wheels.

Cresson, Geo. V. Co., Philadelphia, Pa.

Rubber Goods.

Canfield, H. O., Bridgeport, Conn.

Rules, Manufacturers of.

Keuffel & Esser Co., New York.
 Stanley Rule & Level Co., 29 Chambers.

Rust Preventive.

Bridgeport Gun Implement Co., 318-315 Broadway, N. Y.

Sad Irons.

Enterprise Mfg. Co., Phila., Pa.
 Streeter, N. R. & Co., Groton, N. Y.

Sad Irons, Gas.

Boligiano Mfg. Co., Baltimore, Md.

Sand Paper.

Baeder, Adamson & Co., Phila., Pa.

Sash Balances.

Caldwell Mfg. Co., Rochester, N. Y.
 Pullman Sash Balance Co., Rochester, N. Y.

Sash Cords and Chains.

Morton, Thos., 45 Elizabeth, N. Y.
 Ossawan Mills Co., Norwich, Conn.
 Samson Cordage Works, Boston, Mass.
 Smith & Egge Mfg. Co., Bridgeport.

Sash Fasteners.

Wooster, F. V., Boston, Mass.

Sash Locks.

Champion Safety Lock Co., Cleveland, Ohio.

Sash Pulleys.

Palmer Hardware Mfg. Co., Troy, N. Y.

Sash Weights.

Brown, E. & Co., Philadelphia, Pa.
 Norton Bros., Chicago, Ill.

Allentown Rolling Mill. Allentown, Pa.
Lockhart Iron & Steel Co., Pittsburgh, Pa.
Passaic Rolling Mill Co. Paterson, N.J.
Pottsville Iron & Steel Co., Pottsville, Pa.
Roberts, A. & P. & Co. Phila., Pa.
The Phoenix Iron Co. Phila., Pa.
Tudor Iron Works. St. Louis, Mo.

Shears and Scissors.

Acme Shear Co., Bridgeport, Conn.
Clauss Shear Co., Fremont, Ohio.
Heinrichs, R. Sons Co., Newark, N. J.

Sheet Iron and Steel, Manufacturers of.

Etna-Standard Iron and Steel Co., Bridgeport, O.
Cambridge Iron & Steel Co., Cambridge, Ohio.
Jersey City Galvanizing Co., 112 John St., N. Y.
Mahoning Valley Iron Co., Livingston, Ohio.
Morehead-McCleane Co., Pittsburgh, Pa.
Pierson & Co., 29 Broadway, N. Y.
Singer, Nimick & Co., Ltd., Pittsburgh, Pa.
The Mahoning Valley Iron Co., Youngstown, O.
Alan Wood Co., Philadelphia, Pa.
W. Dewees Wood Co., McKeesport, Pa.

Sheet Zinc.

Matthiessen & Hegeler Zinc Co., La Salle, Ill.

Shelf Brackets.

Atlas Mfg. Co., New Haven, Conn.

Show Cases.

Union Show Case Co., Chicago, Ill.

Sinks.

Douglas, W. & B., Middletown, Conn.

Skates, Ice.

Keene Mfg. Co., Keene, N. H.
Winslow, Sam'l., Skate Mfg. Co., Worcester, Mass.

Skates, Roller.

Henley, M. C., Richmond, Ind.
Winslow, Sam'l., Skate Mfg. Co., Worcester, Mass.

Slag Machines.

Cambria Iron Co., Johnstown, Pa.

Smelting Works.

Reeves, Paul S., 760 S. Broad, Phila.

Soldering Coppers.

Clendenin Bros., Baltimore, Md.
Covert Mfg. Co., West Troy, N. Y.

Speaking Tubes.

Ostrander, W. R. & Co., 204 Fulton St., N. Y.
Wollensak, J. F., Chicago, Ill.

Spelter.

Matthiessen & Hegeler Zinc Co., La Salle, Ill.
Missouri Metal Co., St. Louis, Mo.

Spoons and Forks.

Boardman, L. & Son., New Haddam, Conn.
Holmes & Edwards Silver Co., Bridgeport, Conn.
Rogers, The Wm. Mfg. Co., Hartford, Conn.

Sporting Goods.

Hartley & Graham, 313-315 B'way, N. Y.

Springs.

Clark & Cowles, Plainville, Ct.
Coiled Wire Belting Co., Jersey City, N. J.
Dunbar Bros., Bristol, Conn.
Miller & Van Winkle, Brooklyn, N. Y.
Morgan Spring Co., Worcester, Mass.
Roland, Wm. & Harvey, Phila., Pa.
Sabin Machine Co., Montpelier, Vt.
Tack Mfg. Co., Brockton, Mass.
Washburn & Moen Mfg. Co., Worcester, Mass.
Wolff, R. H. & Co., Ltd., 118th St. and Harlem River, N. Y.

Spring Hinges.

Bommer Bros., Brooklyn, N. Y.
Fullman Sash Balance Co., Rochester, N. Y.
Stover Mfg. Co., Freeport, Ill.
Van Wagoner & Williams Hdw. Co., 14 Warren St., N. Y.

Stamping Works.

Avery Stamping Co., Cleveland, O.
Cleveland Stamping & Tool Co., Cleveland, O.

Staples.

Cobb & Drew, Plymouth, Mass.
Titchener, E.H. & Co., Binghamton, N. Y.

Steam Gauges.

Bristol Co., Waterbury, Conn.

Steam Hammers, &c., Makers of.

Dienelt & Eisenhardt, Philadelphia.
Dudgeon, Richard, 24 Columbia Street, N. Y.
Trethewey Mfg. Co., Pittsburgh, Pa.

Steam Heating & Oil Separators.

Webster, Warren & Co., Camden, N. J.

Steam Separators.

Harrison Safety Boiler Wks., Phila., Pa.
Webster, Warren & Co., Camden, N. J.

Steam Specialties.

Lunkenheimer Co., Cincinnati, O.

Steel, Cold Rolled Strip.

Superior Steel Co., Pittsburgh, Pa.
Wilmot & Hobbs Mfg. Co., Bridgeport, Conn.

Steel Figures and Alphabet.

Krogsrud, W., 61 Fulton St., N. Y.

Steel Importers.

Abbott, Wheelock & Co., N. Y. and Boston.
Hobson, Francis, Seaman & Co., 97 John St., N. Y.
Jessop, Wm. & Sons, Sheffield, England, or 91 John, N. Y.
Milne, A. & Co., 1 Broadway, N. Y.
Newton & Shipman, 83 John, N. Y.
Wetherell Bros., 93 Liberty St., N. Y.
Whitney, A. R. & Co., B'dway, N. Y.
Wolff, R. H. & Co., Ltd., 118th Street and Harlem River, N. Y.

Steel (Mushet's Special).

Jones, B. M. & Co., Boston.

Steel Manufacturers.

Etna-Standard Iron & Steel Co., Bridgeport, O.
Bethlehem Iron Co., S. Bethlehem, Pa.
Baker, Hermann & Co., 103 Duane St.
Carbon Steel Co., Pittsburgh, Pa.
Chester Steel Castings Co., Phila., Pa.
Chrome Steel Works, Brooklyn, N. Y.
Crescent Steel Co., Pittsburgh, Pa.
Frankford Steel Co., Philadelphia.
Gautier Steel Department of Cambria Iron Co., Johnstown, Pa.
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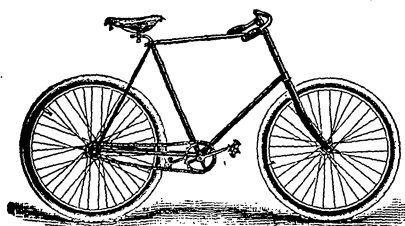
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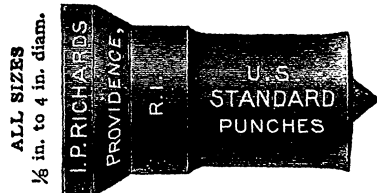
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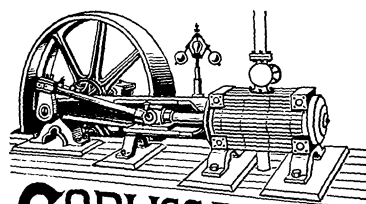
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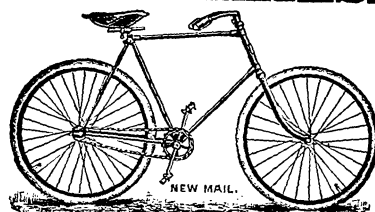
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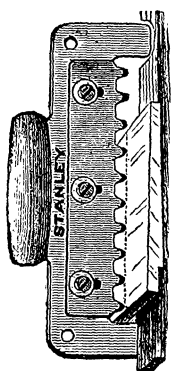
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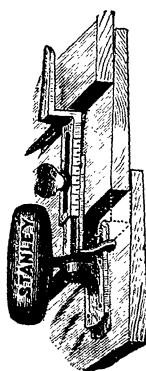
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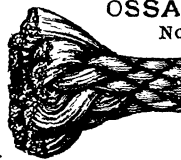
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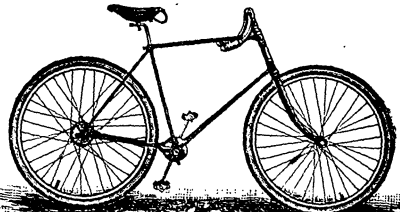


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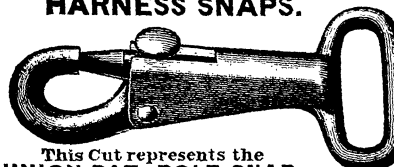
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THE IRON AGE

THURSDAY, AUGUST 9, 1894.

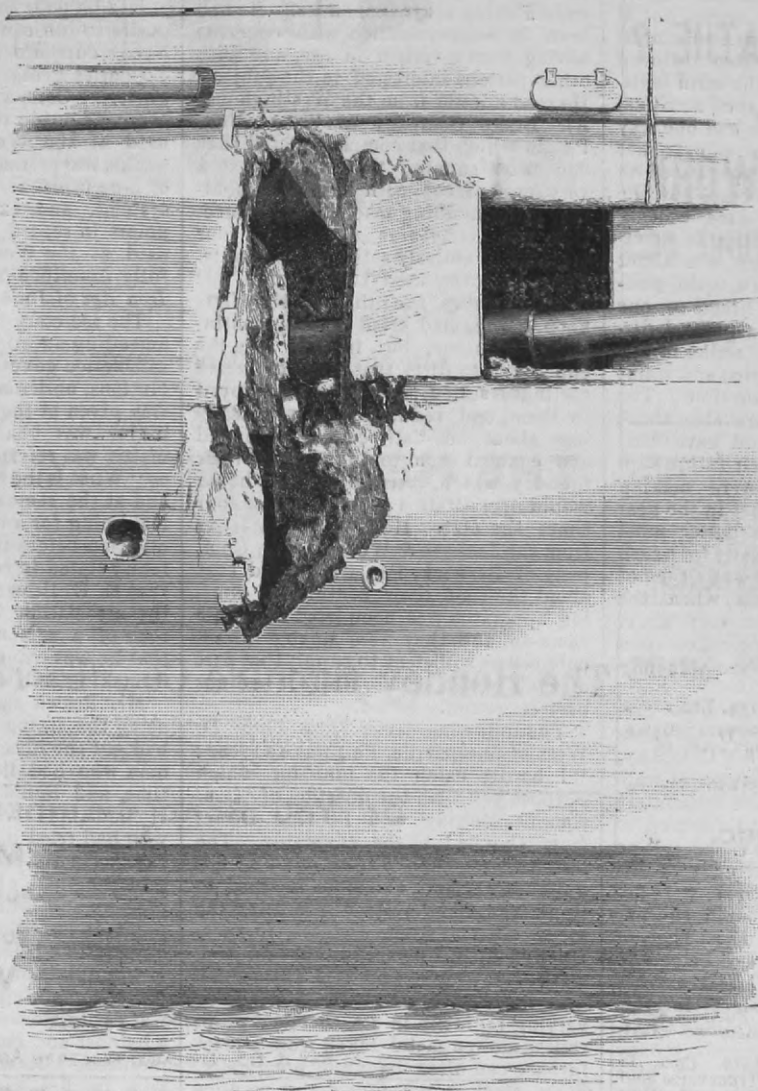
The Accident to the "Chicago."

The what-might-have-beens are often far more agreeable to contemplate after they have not happened, if an Irishism may be pardoned, than though they had actually taken place. This remark has very forcibly impressed itself recently upon the officers and crew of the "Chicago," who had a very narrow escape recently from a more intimate connection with the contents of a locker said to belong to D. Jones, Esq. The ship is moored in the Schelde River with both anchors down and 30 fathoms on each chain, about a mile and a quarter below the city of Antwerp. The river is somewhat narrow but fairly deep and with a sufficient fairway between ship and shore, along which vessels have very little difficulty in passing. Ships intending to anchor between the "Chicago" and the city very frequently begin to "round to" when abreast the man-of-war. The English steamer "Azoo," coming in from Batoum, was about to drop her anchor and had her helm over to turn her head toward the center of the river before letting her anchor go. As she did not turn quite quickly enough, her captain, fearing a little shoal spot that is gradually making out from the river bank, rang "ahead fast" to the engine room. This gave too much way to his vessel and placed him in rather too close proximity to the "Chicago;" so to check his speed he let go an anchor and started his engine astern. All too late, however, as his cable snapped, and although he let go another anchor he could not check his headway, and struck the "Chicago" at her starboard forward gun deck sponson with sufficient force to crush it in and shake things up pretty generally. The stern of the "Azoo" entered the war vessel at an angle of about 60 degrees with the keel line from forward, and penetrated a distance of nearly 3 feet, making a hole 10 feet in vertical height and fully 2 feet in width, extending from the spar deck to about 4 feet above the load water line.

Since the warship has been in commission one of the pet exercises of the

captain has been "collision drill," and the good effect of this constant practice was plainly apparent upon this occasion, for the water tight compartment doors, hatches and air ports were all closed, and the men, including a couple of score of mechanics at work on the boilers, were up on the spar deck and at their stations in two minutes, without confusion or delay of any kind. The damage was now found to consist of one frame 5 x 3 x 1½ inches broken,

outlay of about \$5000. The blow, as may be seen in the engraving, struck just about at the protective shield of the 6-inch breech loading rifle and forced it in onto the trunnion band of the gun. The clamp holding the cog gearing for training the gun was set up but the force sheared off a half-dozen of the teeth on the composition training circle, and practically made the gun unfit for training, as other portions of the gearing were badly bent. It is thought that this gradual breaking off of these teeth acted more or less like a buffer and so prevented the gun from capsizing and the bow of the "Azoo" from entering. Had the blow been delivered a few feet further aft the stem of the merchant vessel would probably have entered the cruiser's side well below the water line, and would have filled the largest compartment in the ship with consequences that may readily be imagined.



THE ACCIDENT TO THE "CHICAGO."

one badly bent and another slightly so. Six plates 1½ inch thick were either broken in or bent so as to need cutting out and replacing. The end of one of the spar deck T beams, 8 inches in depth, is considerably bent and twisted and another somewhat out of line. The outer angle, 3 x 2½ x ¾ inches, waterway on the spar deck was bent in and cracked and the side bulged in. The outer and inner angle and stringer plate forming waterway of gun deck is cut to a depth of over 1 foot, and there is other damage of a more or less serious nature. This will necessitate the removal of the entire sponson and an

At the October convention it is expected that representatives of about 1000 manufacturing concerns will be present and plans for future legislation in the interest of the implement and vehicle makers will be discussed. Every effort will be put forth to make it the largest and most notable gathering ever known in the trade.

H. M. Neill, the cotton statistician, estimates, in a circular letter, the acreage of growing cotton this year as 21,000,000 acres, and the probable crop yield as at least 8,900,000 bales.

The Executive Committee of the National Association of Agricultural Implement and Vehicle Manufacturers met in Chicago on the 30th ult. and decided to hold the first annual convention of the association in that city on October 9. Those present at this meeting were A. L. Conger, president of the association; Vice-President Stephen Bull of Racine; O. D. Freary and H. C. Stover of Chicago; C. H. Deere, Moline; James Deering, Chicago; P. E. Studebaker, South Bend; J. W. Stoddard, Dayton, Ohio, and T. M. Osborne of Auburn, N. Y.

The Foundrymen's Association.

The regular monthly meeting of the Foundrymen's Association was held at the Manufacturers' Club in Philadelphia on Wednesday, August 1. In the absence of the president and the vice-president, the chair was occupied by E. E. Brown of E. E. Brown & Co., Philadelphia. The reading of the minutes of the last meeting was dispensed with, the same having appeared in *The Iron Age* of July 12.

The Executive Committee reported that they could observe no change for the better in the foundry business—in fact every branch of trade seemed to be much depressed. A year had elapsed since the financial panic began, but at the present time there was no financial stringency. The committee believed that the uncertainty of the tariff legislation was the cause of such a critical condition of affairs. The end one way or the other seemed to be so near that traders in some cases had speculated on their opinion of the outcome, but the great masses of people were waiting definite results. According to newspaper reports a settlement was about arrived at, but it had been again postponed on account of the illness of one or two Senators or by a general disagreement. The railroad strike in the West had been finally settled and trains were running on schedule time. The coal and coke strikes were also about ended, and foundries would have little difficulty in obtaining their future supplies. Many concerns were making improvements thinking that in the near future a change for the better must come, and wishing to be ready for a rush of business. The present was a time of the year between seasons when the volume of trade was not very large. The Price Committee being called upon to report by sections, two sections only reported.

Cast Iron Water and Gas Pipe Section.—For this section P. D. Wanner of the Reading Iron Foundry Company, Reading, Pa., reported that prices were still very low—in many cases desperately low. The difficulty he had referred to before as existing still existed. Pipe foundries in the South, having very little trade in their own sections, were dependent upon what they could squeeze out of the trade in the North. That, of course, kept down prices and helped to demoralize the trade to a great extent. The outcome of the business for this year would be about the same as last. While these people made no money themselves, they prevented the pipe men throughout the North and West from making any. The demand for the product of pipe foundries was probably greater than in any other trade, but there were now people in the business quoting prices on pipe who made none, but who tried to sell and were perfectly wild in these days when business was dull and times hard, and they helped to cut up the business. He was afraid there was no hope for the trade as far as the immediate present was concerned. The chances were that there would be an advance in the price of pipe. He believed the tariff question would be disposed of very shortly and a bill something like the Senate bill passed, or there would be no bill at all. In either event he believed pig iron would advance, as there seemed to be a scarcity. Remembering the great quantity of pig iron formerly used and the comparatively small quantity used to-day, there

must be a great increase in the demand before long. If iron advanced, an advance in the price of pipe would, of course, follow. There was not, however, much to expect for the remainder of the year as far as the pipe business was concerned.

Sash Weights.—E. E. Brown reported for this section that there was no change in the condition of business. Sash weights were still being sold at less than cost, and there did not seem to be much prospect of a change.

Under the head of new business Secretary Evans announced as a subject for discussion, "Continuous Melting and Pouring from the Cupola." By this, he said, was meant the running of a heat during the whole of one or two days, and running the iron into molds carried to the cupola, thus saving floor space and effecting other economies. He had been in communication with concerns having such a system in use, and with other persons interested in the subject. He read a letter from the Westinghouse Air Brake Company of Wilmerding, Pa., in which that company stated they had been running their foundry to a very large extent with machine-molding, using molding machines in connection with conveyors for about four years with entirely satisfactory results. They, however, used two cupolas, one in the morning, the other in the afternoon. They had tried running continuously with one, but in that case the cupola got so dirty that some defective castings resulted. The system employed by them had reduced the cost of castings about one-half cent per pound and enabled them to do work in their foundry which, turned out by hand, would necessitate a foundry about four times the size. He also read a letter from the Jackson & Woodin Mfg. Company of Berwick, Pa., who stated that about the time their continuous pouring apparatus was completed the panic came on, and they were unable to secure orders sufficient to supply that part of their works, consequently it had not been thoroughly tested.

The following letter from Thos. D. West of Sharpsville, Pa., was also read: "I hardly catch the idea for which purpose you wish the question of 'Continuous Melting and Pouring Direct from Cupola' to be adaptable. The last question especially is one I do not quite understand, and I am inclined to think you have reference to using the metal direct from a blast furnace. Briefly stated, I would say that for such work for which it matters little if the iron is of a No. 1 or No. 2 grade or varying radically in its chemical properties, molten metal taken from a blast furnace can often be used practically. Some steel works follow this practice to-day in making their own general castings, which, of course, is not a new practice, as such was the way the first castings were largely made. It was abandoned when the cupola came into vogue, since by its use a better iron is assured and greater control of time is obtained. Regarding the question 'Continuous Melting,' I can only say that such is practical for a whole week, day and night, for proof of which we have but to point to the cupolas used at steel works. To make a cupola practical for such long runs simply means that they should have their tuyeres about 4 feet high, the inside diameter not less than 60 inches, and that there should be a good system of 'slagging out.' If by continuous melting you chiefly refer to running steady for ten hours or so during day work, the same principle in design as above stated

would apply. By digging out the breast and pulling out the dross and slag, and making sure that no iron remained in the cupola, it could be banked up so as to render it unnecessary to drop the bottom for a heat or two, but in such cases it would be found that the first melting would be dull. In the work 'American Foundry Practice,' page 302, in a chapter, "Odd Ways of Melting," is detailed the workings of such a practice. Of course, for continuous melting a good system of slagging out must be practiced. The ordinary cupola, with tuyeres from 7 inches up to 24 inches, would not prove very practical for continuous melting, and as the height of a tuyere is what regulates the amount of fuel we must use for a bed, we can readily discern that to use a high tuyere cupola for the ordinary afternoon heats would be poor economy, and that if we desire to run continuous heats we must have a cupola designed to that end."

Charles Pease of the Link Belt Engineering Company, Philadelphia, which company put in the system of conveyors used at the Westinghouse and other works, was present. He showed a number of blue prints and plans of the different systems, and explained the technical points in regard to them. The plant used at the Westinghouse works was fully described and illustrated in *The Iron Age* of June 5, 1890.

The secretary then read a resolution amending a section of the by-laws of the association governing the passing of resolutions, notice of the moving of which was given at the last meeting. As the mover was unable to be present the matter was referred to the next meeting.

"What is the best and most effective, and at the same time the most economical lining for a cupola?" was the next question before the meeting. The secretary stated in regard to this question that E. E. Brown at the last meeting of the association had described a silica rock of a soft nature and very cheap, that he was using as lining for a cupola in making sash weights.

Mr. Brown said that he had been using the lining for over a year. He had got the idea from an old foundryman who had been using it for a long time, and found it serve to advantage. He had since recommended it to others, who had tried it and had continued its use. He did not think it adapted to take the place of bricks, but for chipping up and lining around the melting point it lasted longer and seemed to have quite a beneficial effect on the iron. It was obtained in the shape of large stone, something like cellar stone, and was easily worked. A man could take a hatchet and cut it up into any shape required. It was very soft and was laid in fire clay. The first course against the stack was of brick and the stone lining was from 2 to 4 inches thick. He had found it last twice as long as brick, and he had experimented with nearly every kind of brick on the market.

Secretary Evans instanced a case where a mixture of red gravel and fine sand, about half and half, was in use, and it had been found to last about twice as long as the old lining of Lumberton sand, commonly used in this section.

The chairman announced with regret the death of A. Burton Paxson of the firm of J. W. Paxson & Co., Philadelphia, members of the association.

P. D. Wanner was then invited to address the meeting on "The Tariff and Its Relation to the Present Business Depression." Mr. Wanner made a lengthy address on the subject, his re-

marks being much appreciated by those present.

Upon the conclusion of the address the meeting adjourned.

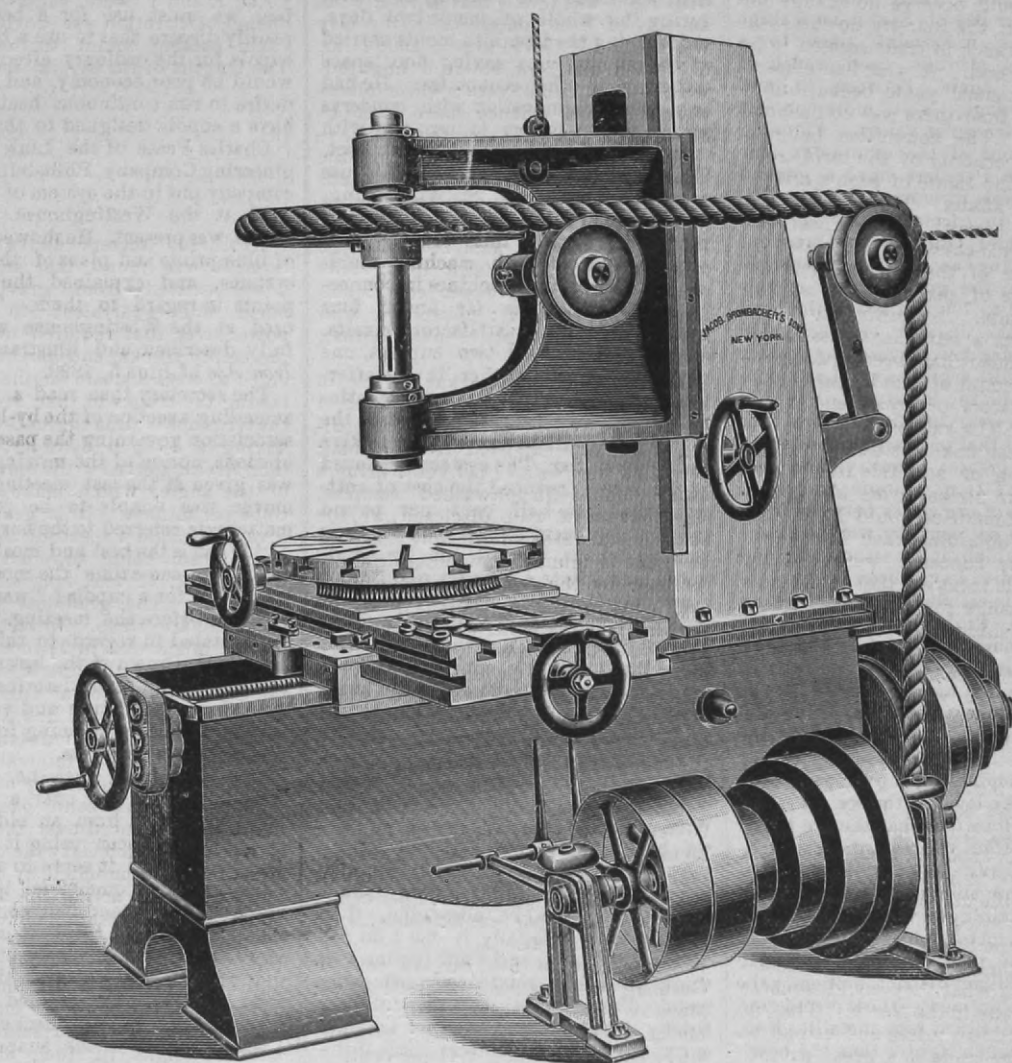
Vertical Milling Machine.

Jacob Brombacher's Sons of 30 Cliff street, New York, are building a machine for all around milling as well as die work. The large flat table is provided with four T-slots running its entire length for plain milling, the rotary table shown in our engraving being clamped to the main table for die work.

which swings on an arm and is held against the rope by a weight which always maintains a uniform tension. The experience of the builders of this machine has shown that rope driving gives more power than belt and there is less tendency to slip. The feed screw on the main table has a handle on each end, and the automatic feed mechanisms, being centrally located, can be operated with equal facility from either side of the machine. All the feeds are automatic except the vertical. The principal dimensions of the machine are: Weight, 6000 pounds; length of head, 28 inches; adjustment of head,

from 350 pounds to 240 pounds. Many wells have been abandoned and the end is only a question of time. The report points out that during the first four years of consumption the waste of gas was equivalent to \$20,000,000. The waste still continues in the domestic use, which ought to be dispensed to the consumers in meters instead of through mixers. Cheap piping and cheap connections have already caused heavy waste.

An 8000-ton forging press is now in use at the River Don Works of Vickers, Son & Co., Sheffield, England. The



VERTICAL MILLING MACHINE.

The carriage has a cross feed of 23 inches and the table a longitudinal feed of 30 inches. Both feeds are automatic, and the longitudinal feed is provided with an automatic stop in addition. All the gears in the carriage are made of steel. The feed screws have V-threads flattened on top and run in phosphor bronze nuts, these being split so as to allow for taking up wear. The head carrying the vertical spindle is counter-balanced and has an adjustment of 23 inches. The spindle runs in phosphor bronze bushings, which are taper on the outside, and are split and provided with a nut on the small end to allow for taking up wear. The spindle may be driven by rope, as shown in the cut, or by belt in the usual way, as may be preferred, the arrangement for rope, as shown in the cut, being one idler,

23 inches; distance from center of spindle back, 30 inches; length of longitudinal feed, 30 inches; length of cross feed, 23 inches; floor space over all, 100 x 54 inches; extreme height, 7 feet 6 inches.

The Indiana Natural Gas Supply.

—The annual report of State Gas Inspector Jordan, made public on the 1st inst., contains much that is interesting. The amount of capital invested in the State, due to the discovery of gas, he says, is \$800,000,000, and the influx of investment still continues. The gas has been drawn upon so heavily that there is now little more productive territory to be had. He says that already the limit of supply has been reached, and that the initial rock pressure has fallen

shareholders, at the close of a recent meeting, were invited to inspect the working of this machine, and it is stated an ingot weighing 66 tons was taken from the furnace and conveyed to the press, under which it was swiftly and silently squeezed to the required proportions. When finished it will be 18 inches thick, and is ultimately to form one of the plates of the Russian war ship "Three Saints."

It is stated that some trials have recently been made in the Liège district in Belgium, with the "trueing up" in position of the rolls of sheet rolling trains which have become hollowed in the middle owing to constant use. Emery wheels have, it is said, been used for the purpose, the results having been successful.

Transporting and Dressing Iron Ore at Cabarceno, Spain.*

BY FREDERICK KENSINGTON.

The deposits of iron in the provinces of Biscay and Santander appear to occupy a position in the Upper Jurassic formation, and are the products of replacement—that is, sparry or spathose ores, being the primary mineral from which the limonites have been produced and redeposited by the action of oxygen and water; but there exist, especially in the province of Santander, other deposits, the origin of which it is not so easy to explain. Along the southern margin of the bay of Santander a ridge of limestone mountains rises to a considerable altitude, and south of this ridge again, between it and a further range, is a more or less broken and irregular valley. Allowing for the contour of the mountains (the spurs of the Pyrenees have a general east and west direction in this district), extending from Solares through Cabarceno and Obregon to Guarnizo, and embracing an area of about 90 square miles, the general level of this valley is 600 to 700 feet above the level of the sea, the Jurassic or Neocomian limestone being here covered by surface deposits of soft argillaceous drift, containing limonite interspersed in the clay in pieces varying from several tons in weight to that of fine grains of sand, by far the greater quantity, however, being of the size of shingle or gravel. The amount of ore varies between 5 per cent. and 40 per cent. by weight of the clay with which it is associated; and these deposits have been proved to overlie the limestone 180 feet thick in some places, while in others they are not more than 2 feet thick. The presence of these clays containing iron is, however, by no means limited to the valley; in some places extensive deposits are found between spurs of the limestone or in deep basins far up the side of the mountain, upward of 1200 feet above the level of the sea.

It is a curious fact that the ore found is of two distinct varieties, one part consisting of heavy water worn pebbles, boulders, and shingle of hard compact nature, containing 58 per cent. to 59 per cent. of metallic iron, and the other of soft porous pieces of rubio similar to that of the Bilbao district, evidently the result of replacement—these pieces containing more silica, less metallic iron, and being much lighter than the boulders and pebbles. It is not difficult to trace the boulders and pebbles as the result of glacial drift of the Pleistocene age; but this drift must have occurred at long intervals of time, as there is evidence of lakes having existed, with their margins at many levels, and it is possible to follow a shore of iron shingle or gravel in many directions, while interspersed throughout occurs the rubio ore bearing no trace of travel—the whole presenting a most interesting geological problem. The existence of these deposits of iron ore in the Santander district has been long known, but until it became evident that Bilbao could not long maintain the large annual output, no one seemed interested in working this district. A little of it was occasionally riddled or sifted out of the surrounding earths by the land owners, and a few cargoes were sent to Rotterdam, Philadelphia and the Middlesborough district, but the result was unsatisfactory; the ore contained too much clay,

was dirty, and little liked by the ironmasters, while the expenses attending its preparation for the market and transport rendered it impossible to compete with the Bilbao ores.

Practical men saw at once that if this mineral was ever to be worked at a profit it must be on a large scale, and that some cheap, expeditious plan must be adopted to separate the mineral from the surrounding clay. The only means of doing this effectually was by washing, and here the first difficulty occurred, as the district did not contain sufficient water for the purpose. After many experiments and trials for determining the value of the Cabarceno district, it was found that generally the amount of iron contained in the clay was about 460 to 490 tons in 1000 c. m. of "wash dirt," or about 6 hundredweight in a cubic yard; while places were cut into whence more than 15 hundredweight was extracted.

With regard to the quality of the ironstone, but little variation existed. A large number of samples were washed by hand, and were afterward dried at 100° C., and were analyzed, with the following results: Metallic iron, 59.50 per cent.; silica, 1.70 per cent.; sulphur, 0.08 per cent.; phosphoric acid (equals 0.088 per cent. of phosphorus), 0.08 per cent.

The ore proved remarkably rich in iron, being in that respect at least 4 per cent. above the average of the ordinary rubio ores exported from Bilbao; the silica was low, $\frac{7}{8}$ per cent. being a usual amount in unwashed samples. The phosphoric acid disclosed by the analysis was rather high, but it should be borne in mind that washing iron ore increases by the removal of all soluble earthy matter the percentage of all the remaining ingredients, whether good or bad. Further, these being surface tests, the mineral would probably be affected by the phosphoric acid associated with decaying animal and vegetable matter which is always present on the mountain sides, and would be conveyed to the iron by the surface water. Samples subsequently taken from a pit 25 feet deep gave results as follows: Metallic iron, 58.99 per cent.; manganese, 0.30 per cent.; silica (insoluble), 4.50 per cent.; alumina, 0.28 per cent.; sulphur, 0.10 per cent.; phosphoric acid, 0.02 per cent.

An average of five cargoes sent to Germany at the end of 1892 gave: Metallic iron, 57.17 per cent.; phosphoric acid, 0.047 per cent.; sulphur, 0.044 per cent.; silica, 2.41 per cent.

In this last analysis, though the amount of phosphoric acid is satisfactory, it will be seen that the metallic iron has decreased, but it must not be forgotten that this is a cargo analysis, and that the iron was washed by machinery, and, being a bulk sample, represents more accurately the commercial value of the deposits.

A company was formed in 1889 to work a concession of 500 acres in the district of Cabarceno, to erect efficient washing machinery, and to construct a line of railway from this place to the margin of the bay and there erect the necessary ore cleaning plant. The first consideration was the method by which large quantities of mineral earth could be transported to the washing floors on the shore of the bay, the ground being separated from the latter by a hill 1166 feet high, situated at a distance of rather more than 3 miles in a direct line south; it was necessary either to cross this hill or to run round the foot of it, either on the east or west side, in which case a line of railway over 13

miles in length would have been required. It was decided to construct a line of chain railway over the top of this mountain, and, on the completion of the survey, it was found that the level of the mineral ground on the south side of Peña Carbargo was 493 feet above the level of the bay on the north side—a decided advantage in power being thus secured for the line, though not sufficient to enable the trucks to be drawn up without the assistance of steam power on the south side.

Commencing the ascent of the mountain from the north side, the road was divided into six sections—A and G being the terminal points, while at B, C, D, E and F were angles where the change of direction was provided for by a chain passing round toothed wheels. The lengths of the several sections are:

	Meters.
A.....	840
B.....	273
C.....	387
D.....	320
E.....	470
F.....	490

At F, 105 meters above the mine level, it was found that an excess of power existed—from gravitation on north side—equivalent to 12 horsepower over that required to draw up the empty trucks, and here it was decided to erect a steam engine capable of raising the trucks to that station from the terminus G; this engine is horizontal, having a 16-inch cylinder with a 20-inch stroke, geared to the toothed wheels of the angle, which make 50 revolutions per minute. It is geared so as to give the chain a speed of $2\frac{1}{2}$ miles per hour, steam being supplied by a Cornish boiler, 21 feet long and 6 feet in diameter. The gradients throughout the line are steep. In section D they are as much as 1 in $2\frac{1}{2}$ in some places. The length of the line is 3280 meters, the trucks are placed at a distance of 20 meters apart, and the line is capable of bringing over the mountain between 800 and 1000 tons of mineral earth in 12 hours. The speed on the north side is regulated by brakebands passing round brake wheels placed over the top of the claw wheels which carry the chain, these again being surmounted by a horizontal toothed wheel acting on a large fan brake. The result obtained may be considered satisfactory, 800 to 1000 tons being raised 500 feet high and carried a distance of 3280 meters with the aid of an engine of 24 horse-power, by the expenditure of 19 hundredweight of fuel, the cost of haulage being rather over 1 penny per ton per mile, including all charges. The gauge of the line is 18 inches throughout, the size of the bodies of the wagons being 3 feet 6 inches by 2 feet 6 inches by 1 foot 8 inches. The size of the chains varies between $1\frac{1}{8}$ inches and $\frac{1}{2}$ inch, the total weight of chain being 80 tons. The total cost of the 3280 meters of line, fully equipped with 550 wagons, was approximately £9500. The level across the valley from station G—terminus of chain railway—distance 1 mile, to the iron deposits is worked by locomotives of the platform vertical boiler type on an 18-inch gauge line.

The washing machinery in which the mineral earth is treated consists of three wrought iron drums, Fig. 1, 6 feet 6 inches in diameter and 15 feet long, fitted with an internal worm of 1 foot pitch, making 12 revolutions per minute. These drums are fitted with longitudinal lifters, 4 inches broad, at intervals of 12 inches between the worm, which alter-

* Read before the Institute of Civil Engineers.

nately lift and drop the mineral earth. One end of the drum is partially closed, leaving room for the earth to enter, while the other is raised in conical form to allow the mineral to pass out at that end while retaining a certain depth of water in the drum. The mineral earth is fed into the partially closed end of the drum at the rate of about 6 cubic feet per minute, accompanied by about 80 gallons of water during the same time.

The revolving drum washes and separates the mineral, which is propelled forward by the action of the internal worm, while the mud is discharged at the end at which the earth enters, the mineral being delivered into wagons at the conical end, in traversing which it is met by a powerful spray of water, which washes it completely clean—the quantity of water thus used being about 70 gallons per minute. The weight of the drums, fully loaded and running, is 10 tons each. They revolve on cast steel rings on steel rollers fitted in cast steel cradles, the motion being imparted by a pinion acting on a spur ring bolted to the body of the drum and worked

that 40,000 tons will be produced. Two other undertakings of the same description have lately been started, and it is proposed to erect machinery in the Bilbao district to wash the dump heaps, which, as already stated, contain valuable mineral.

The cost of this mineral f.o.b is about 4 shillings per ton, exclusive of royalty and administration charges, but it should be possible to reduce this. The cost of production must in all cases of this kind depend greatly on the quantity turned out, there being a certain establishment charge whether the output is 1 or 20,000 tons. However, putting the output at 40,000 tons per year and the value of the mineral earths washed at 460 tons to 490 tons per 1000 cubic meters, the cost is as near as possible 4 shillings f.o.b., this amount representing the cost of digging at the mine, the cost of carriage of "wash dirt" to the washers, washing the mineral, conveyance to the port, quay dues and cost of putting on board.

The refuse mud is collected in large tanks constructed on the marshes in the

find a buyer. They have so much work on hand in equipping street railroads that it will be necessary to find new quarters speedily. The Wells & French Company's loss was much less serious, as business is not pressing in the car building line and all of the plant but the foundries is in condition to be used.

A System of Wages Contracts.

An employer of labor in Chicago has caused to be published a form of wages contracts, which he introduced in his manufactory some years since, and which he says has worked very satisfactorily. The form is as follows:

Employee's Contract.

I, —, of the city of Chicago, residing at No. — street, being desirous of continuing in the employ of —, hereby agree in consideration of such employment and the agreements on the part of the employer hereinafter contained, that:

1. I will conduct myself as a gentleman in and about the business in which I am employed and toward my fellows.
2. I will perform my duties to the best of my ability and abide by the rules of the firm as from time to time adopted.
3. I will remain in employ of said firm until — unless sooner discharged or released in accordance with the conditions hereinbelow mentioned.
4. I will leave 10 per cent. of my wages on deposit with my employer until such percentage so left amounts to the sum of — dollars, after which I am to draw all my wages excepting said deposit, upon which I am to receive interest at the rate of 6 per cent. per annum, unless said deposit is forfeited in accordance with the conditions hereinbelow stated.
5. I agree not to join in any strike or remain away from the shop of my employer during any strike of employees of any other establishment in the United States or of any employees of said firm, under penalty of forfeiting to said firm for its own use the sum deposited in accordance with Clause 4 of this agreement, which sum shall be in full of all damages.
6. I agree not to join or remain a member of any organization in which the obligations of members are such as would in any way prevent me from carrying out this agreement in good faith.

Employer's Agreement.

1. The said firm agrees on its part to furnish employment to said employee until —, at the rate of — dollars per day of ten hours.
2. To pay to said employee, Monday of each week, all wages earned the preceding week, except the 10 per cent. to be retained in accordance with this agreement, above noted, clause four.
3. To pay to said employee at the expiration of this agreement all moneys due, including 6 per cent. interest upon all moneys retained in accordance with this agreement.
4. Said employer agrees not to discharge the said employee excepting for cause, and he shall be entitled to a written notice of such discharge one week preceding the date upon which employment shall cease.
5. Said employer agrees that he will release from this agreement said employee in case any contingency arises that in the judgment of the managers or superintendent of the department in which he is engaged is such as to justify said employee to a discharge.

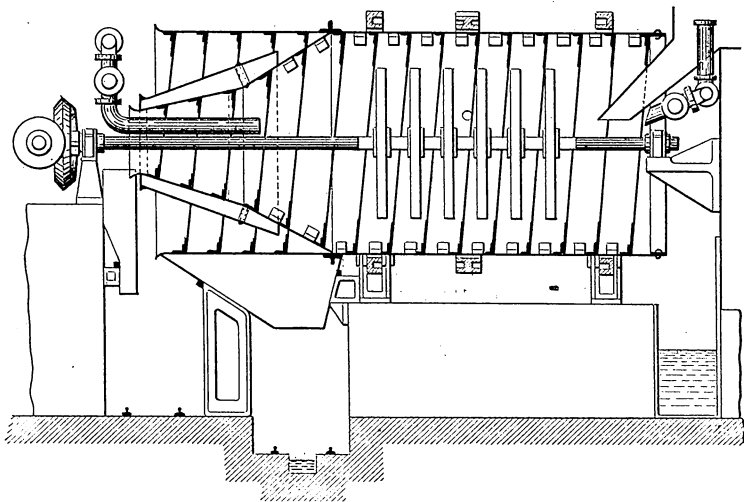


Fig. 1.—The Kensington Ore Washer.

by means of pinion and miter wheels from the line shaft. Each drum is capable of producing 70 to 100 tons of perfectly clean iron from the mineral earth in ten hours, the amount of mud or clay left in the ore never exceeding 2 per cent.

The salt water used for washing the mineral is drawn direct from the bay by a pump, having two bucket plungers of 12 inches diameter and 14 inches stroke, fitted with india rubber annular grid valves, revolving at the rate of 40 revolutions per minute. This pump is driven by a 12-inch belt from the intermediate shaft and raises the water 10 feet, throwing it 15 feet above the pump chamber. The whole of the machinery is driven by a horizontal surface condensing engine, having a 24-inch cylinder with a 3-foot stroke. The air pump works direct off the piston tail rod, the water passing through the condenser before going into the drum, and a 24 inch vacuum is obtained. The steam is supplied by a Lancashire double flue boiler, fitted with Galloway tubes, 7 feet in diameter and 22 feet long, the steam pressure being 50 pounds per square inch.

In the first year of the company's work 23,000 tons of washed ore was turned out, giving 57 per cent. of metallic iron when dried at 100° C., while in the present year, 1893, it is expected

Bay of Santander, and in addition to the profit on the mineral it is expected that a considerable return will be forthcoming from the reclaimed land. The whole of the works were designed by the author, under whose direction they were constructed.

A destructive fire in Chicago on the night of the 1st inst. completely wiped out the plant of the Siemens & Halske Company and a considerable part of the car works of the Wells & French Company. The fire originated in the lumber district in the vicinity of these establishments and caused a total loss of about \$2,000,000. The Siemens & Halske Company's loss was about \$300,000, partly covered by insurance, and that of the Wells & French Company was \$65,000, fully covered. The Siemens & Halske plant was considered one of the most important electrical manufactories in the country, although built only within the last two years. Some valuable dynamos for street railroad plants, which were about ready to be shipped, were burned, as well as a great deal of other work in various stages of completeness. The company are negotiating for the plant of the defunct Grant Locomotive Works, which has been in the market for some time, but has thus far failed to

6. Said employer agrees not to join or remain a member of any organization in which the obligations of members are such as would in any way prevent them from carrying out this agreement in good faith. It is mutually understood between the parties hereto that the object of the employee in entering into this contract is to obtain continuous and remunerative employment, and upon the part of the employer to retain competent and reliable employees, upon whose services he can confidently rely. It is also mutually understood that 10 hours shall constitute a day's work; but said firm shall have the right, during seasons of dullness, to run upon short time; not less than 45 hours per week, and during such short time it shall only pay for the number of hours' service actually rendered.

Signed in duplicate at Chicago, this day of A.D. 189..

He further says: "It is not my practice to have contracts with all my men, but only with so many as I feel certain that I will be able to furnish work for. Hot headed men rarely strike unless they feel that the strike will be practically unanimous, as 25 or 50 per cent. (which always includes the best men) forms a nucleus around which a perfect organization can be quickly effected. I have had no difficulty whatever in inducing men that I wanted to sign the contract, as it is considered fair. The deposit is required to place the men upon an equality with me in a financial way so far as the contract is concerned. The contracts are made to expire at different times during the year, so that comparatively few are expiring upon any given date. The men in the shop consider an offer of a contract as a compliment, and those not under contract look upon those who have them with some jealousy; but no trouble has arisen from this cause. It is a good thing for the men, as it teaches them that they can save money; and several of my men have paid for homes from their savings. The contract does not prohibit unions for legitimate purposes; social advantages, life insurance and sick benefits, &c."

Duluth News.

There are over 1000 men employed at the mines of the Metropolitan Land & Iron Company, owning the Norrie and others, where the late Gogebic range strike was sharpest and most hotly contested by the men. The men have gained absolutely nothing and the country is face to face with a loss of \$125,000, made by the bills for the military and other expenses directly traceable to the strike. Besides that loss is the six weeks idleness of 1500 men. Shipments of ore are to be very active from this range for some time. The American Steel Barge Company are over 50,000 tons behind in their ore carrying contracts, and other vessel interests are nearly as badly off. Up to July 30 Gogebic shipments had been for the season 770,000 tons, of which only 60,000 tons had gone out in the preceding three weeks, but on August 2 there were clearances of 25,000 tons, and this rate will be frequently reached for some time to come.

About 3,000 000 gross tons have gone from Lake Superior for the season to August 1, and the several ranges are expected to send out for the year about as follows: Mesaba, 1,750,000 tons;

Gogebic, 1,300,000; Marquette, 1,200,000; Vermilion, 1,000,000; Menominee, 800,000—total, 6,150,000. While the season is not yet half passed, considerably over half this total of ore, including the Menominee, which ships largely from Lake Michigan, has been sent forward.

The Mesaba is sending ore down rapidly, a considerable portion of it being on the 1,000,000 ton contract made by John D. Rockefeller with the Merritts of Duluth a year ago. This ore is all coming out of the Mountain iron mine, which reached a total of between 8000 and 9000 tons for a day's output one day last week. The Oliver mine is shipping regularly about 5000 tons, and the Biwabik will be sending out ore under its new contract next week quite freely. It is hoped to ship 3000 tons a day for the season, after the mine is in condition, probably about next month. On the same range the Rathbun will begin shipping in about two weeks, the Lake Superior is sending out a little ore, the Hale will ship next week, the Norman has begun steady work, and the Auburn is getting away with 100 tons a day. Other new mines on the range have drawn off and will do little this season.

A most peculiar condition of lake freight affairs exists at the present time. Vessels are carrying hard coal up to Duluth—1000 miles—at 15 cents a ton, and taking back ore at 60 cents, wheat at 1½ or 1¾ cents, or lumber at \$1.40 and \$1.50 per 1000 feet. As showing the peculiarities of the situation it may be stated that wheat is being taken up the lakes from Toledo to Chicago, and that at least 1,000,000 bushels is contracted for this strange trade. The rate is 1½ cents. A vessel master who brought to Duluth 2300 tons of coal, and fueled for the return trip at the dock where he discharged, found, on settling with the coal company, that it was in his debt just 52 cents. Vessel business is very lively so far as tonnage goes, however, at the head of Lake Superior, and far more ore, flour, lumber and merchandise is being handled than ever before. Over 65,000,000 feet of lumber have been shipped from Duluth so far this season, and 80,000,000 from Ashland.

The best cre loading record of the lakes was made last week at Duluth. A total of 1760 gross tons were loaded into a vessel in 45 minutes, and the trimming occupied but 15 minutes longer. On another vessel, at the same dock, 3100 tons were loaded, no trimming being required, in 90 minutes.

It is stated, and not denied by the officials of the Northern Steamship Company, that the company intend to begin work this winter on a third exclusively passenger express ship for the Buffalo-Duluth trade. The "North-west," put on that run in June, has already justified the sagacity of her builders and is doing an excellent business. The second vessel of the line will be out next June, being now nearly completed, and the third in the spring of 1896. The latter will be 425 feet long, the present ship being 386.

A circular recently issued by the Canadian Commissioner of Customs will, it is thought, have an important effect on American importations into Canada. The notice is addressed to collectors of customs in Canada and instructs them in reference to the collection of duties on goods purchased in bond in foreign countries. It directs them to add to the value of the goods

purchased in bond the customs or internal revenue duty leviable in the country where the goods are purchased, and which is collected in all cases by the foreign government concerned before the goods are allowed to go into home consumption in such foreign country.

Treasury Decisions.

Drawback on Barb Wire.

TREASURY DEPARTMENT, June 13, 1894.

SIR: On the exportation of barb wire manufactured by the Consolidated Steel & Wire Company (Iowa Barb Wire Department) of Allentown, Pa., from steel billets made by the Maryland Steel Company of Sparrow's Point, Md., from imported iron ore and imported ferromanganese, and delivered to said Consolidated Steel & Wire Company during the period from July, 1892, to December, 1893, a drawback will be allowed equal to the duties paid on the imported materials used in the manufacture less the legal deduction of 1 per cent.

The quantity of imported materials used in the manufacture of the steel billets shall be determined by allowing for each ton (2240 pounds) of such billets 4618 pounds of imported ore and 28 pounds of imported ferromanganese.

The quantity of steel billets used in the manufacture of the barb wire shall be determined by allowing for each 100 pounds of the exported wire 110 pounds of said billets, and for every 100 pounds of wire exported 114 pounds of steel billets shall be checked from the record of such materials. W. E. CURTIS, Assistant Secretary.

Drawback on Band Saws and Band Saw Blanks

TREASURY DEPARTMENT, June 28, 1894.

SIR: On the exportation of band saws and band saw blanks manufactured by Joshua Oldham of New York City, from imported steel plates, a drawback will be allowed equal in amount to the duty paid on the imported material used in the manufacture less the legal deduction of 1 per cent.

The quantity of imported material so used shall be determined by adding to the net weight of each size and variety of saw or blank exported the following percentages:

Width.	Length.	Gauge.	Percentages.	
			Band saws.	Band saw blanks.
Inches.	Feet.	No.		
6	31	17	24.79	12.10
7	45	16	23.55	12.32
8	48	15	19.57	11.08
9	48	15	18.58	11.11
10	48	15	18.49	11.10
11	48	14	15.42	9.65
12	48	14	14.81	9.64

The different kinds of saws or blanks exported shall be separately described in the entry under which they are inspected and laden, by width, length, gauge and weight, and the net weights shall be verified by the returns of a United States weigher.

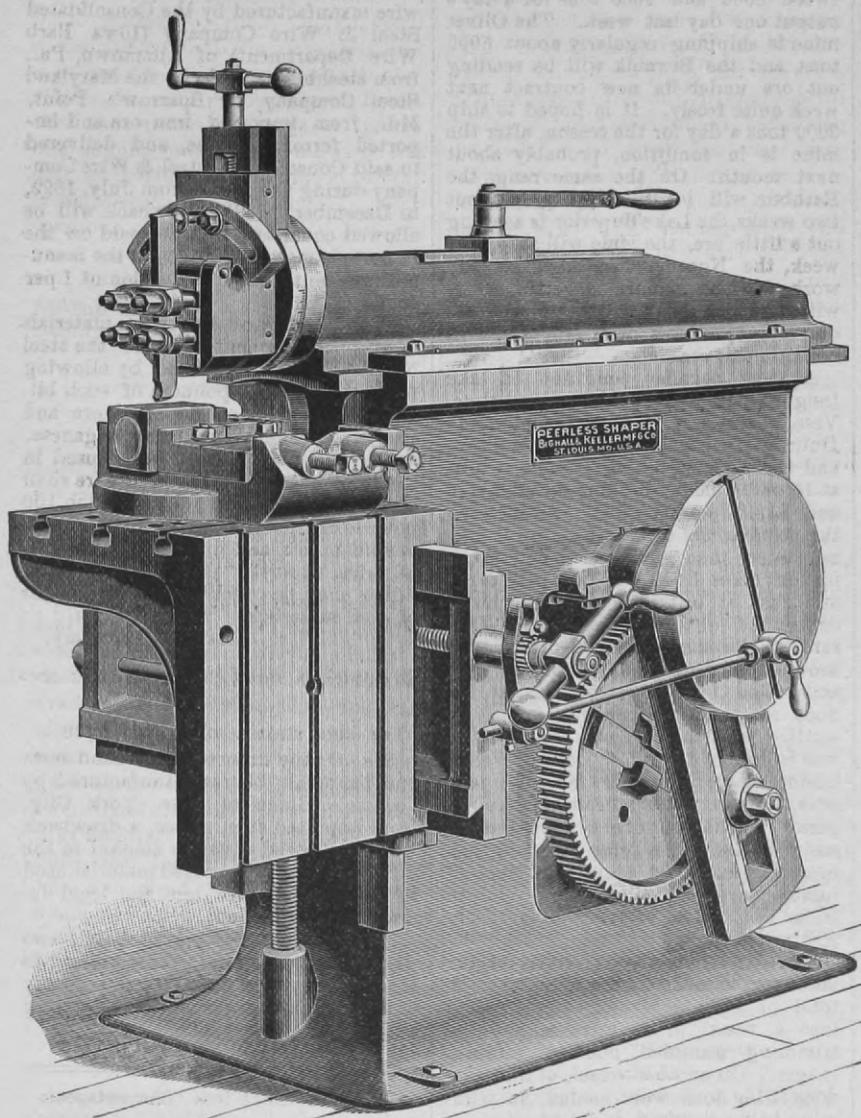
The manufacturer's affidavit on the drawback entry must state the width, length, gauge and weight of the imported bands or plates from which the exported articles were manufactured.

W. E. CURTIS,
Assistant Secretary.

Fifteen-Inch Peerless Shaper.

The Bignall & Keeler Mfg. Company of St. Louis, Mo., build a shaper which is designed for extra heavy work. It is simple in construction, the working parts are easy of access and the adjustments can be quickly and easily made. Rigidity and accuracy are assured by the fact that the ram is square gibbed, has a double rack with staggered teeth, and when at the full stroke of 18 inches clear has 33 inches in the ways. The

By the preliminary report of the operations of the Internal Revenue Bureau for the last fiscal year, recently submitted to the Treasury, it appears that the total collections of internal revenue in the United States for the year were \$147,168,442, a decrease of \$13,836,547 as compared with the previous year. The percentage of cost of collection was 2.70, being an increase of 0.08 over the previous fiscal year. The principal



FIFTEEN-INCH PEERLESS SHAPER.

stroke of the ram can be instantly changed, and it has a quick return without the use of shifting belts. Shafting up to 3½ inches in diameter may be key seated at any point in the length, the piece being inserted in the opening immediately beneath the ram. In addition thereto the platen is also supported by the frame of the machine. The head has a new swiveling device and is accurately graduated, so that work may be planed to any desired angle. All the gears are machine cut and the ways throughout are provided with steel gibs. The automatic side traverse of the table is 20 inches and the vertical adjustment of the table is 14 inches. The machine occupies a floor space of 26 x 33 inches and weighs 2500 pounds.

sources of the receipts were: Spirits, \$85,259,546, a decrease of \$9,460,714; tobacco, \$28,617,898, a decrease of \$3,271,813; fermented liquors, \$31,414,493, a decrease of \$1,134,489, and oleomargarine, \$1,723,479, an increase of \$52,836.

At length the vexed question of a site for the new mint in Philadelphia has been settled. Secretary Carlisle last week selected a site on Spring Garden street, for which \$305,000 will be paid.

The London *Times* states that Hiram Maxim has constructed a flying machine in which he and two others have successfully accomplished a flight of 500 feet. The machine is about 100 feet wide, has four wings and is propelled

by two screws, which are driven by two compound engines.

According to the *Textile World*, the effect of the late depression has been illustrated in the diminished construction of new textile mills. Only 58 mills were completed during the half year ended June 30, 1894, compared with 110 and 135 for the same periods in 1893 and 1892 respectively. The bulk of new construction has been in the Southern States.

In the sinking of the powerful barbette battle ship, "Chen-Yuen," and the capture of the steel cruisers "Chih-Yuen" and "Ching-Yuen," by the Japanese, the Chinese have lost the flower of their navy and cannot now hope to cope with the Japanese at sea. The details of the naval battle between the two fleets, when received, should throw some interesting light on the capabilities of the modern ironclad in war.

The farmers of Indiana are feeding wheat to hogs and selling their corn. Wheat brings only 43 cents a bushel, delivered at the country stations, while corn sells readily at from 45 to 47 cents a bushel. The farmers say that as wheat contains twice as much nutriment as corn, and hogs are fetching good prices, it is an economy to feed the wheat to the hogs and sell them and the corn.

Trade Publications.

THE STOVER MFG. COMPANY of Freeport, Ill., in a pamphlet describing the Ideal irrigator wind mill, tell how to build and maintain reservoirs and how to construct ditches. This wind mill was expressly designed and purposely made for irrigation and other heavy work.

THE COCHRANE SEPARATORS for use on live and exhaust steam mains are described in a catalogue by the Harrison Safety Boiler Works of Philadelphia.

The Pennsylvania Railroad Company intend building 100 locomotives in their Altoona shops this year, a considerable reduction as compared with previous years, when the number has usually been from 230 to 250.

The tin mining industry of Mergui, Lower Burma, which has been for years in a depressed and neglected condition, is said to have revived considerably of late under the British rule. The number of active mines and of miners is rapidly increasing. The mines form a portion of the great stanniferous belt which stretches along the granitic backbone of the Malay Peninsula.

R. D. Servoss, 21 and 23 Centre street, New York, has published a sectional road map of Kings and Queens Counties, N. Y., giving the good roads. The work is in pocket size, and while more particularly intended for cyclists, the detail and care used in its compilation recommend it to the general public as well. A key map admits of ready reference.

The Ross Company of Jersey City, contractors for the work of deepening and improving the channel of the upper Hudson River, are using a new invention in their operations in the shape of a steam chisel, which cuts the rock away better and more economically than it could be done by blasting, and which is also safer.

The Iron Age

New York, Thursday, August 9, 1894.

DAVID WILLIAMS, - - PUBLISHER AND PROPRIETOR.
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GEO. W. COPE, - - ASSOCIATE EDITOR, CHICAGO.
RICHARD R. WILLIAMS, - HARDWARE EDITOR.
JOHN S. KING, - - BUSINESS MANAGER.

The Charcoal Pig Iron Industry.

The publication by the American Iron and Steel Association of the statistics of pig iron production for the first six months of this year have drawn fresh attention to the rapid decline in the output of charcoal pig iron. The figures for this period are the smallest in 30 years. All the charcoal furnaces of the country turned out only 102,697 gross tons, or less than the product of but four fair sized coke furnaces. In the 12 months ending June 30, 1894, the charcoal pig iron production was 252,246 gross tons, which falls below the output of any previous year since 1865. In view of these comparisons, it is interesting to examine the records of the iron trade and see precisely what changes have occurred since the United States began to figure to any considerable extent as an iron producing country. In 1854 charcoal was the leading blast furnace fuel. Anthracite coal followed it closely in the quantity of iron smelted with coal for fuel. The use of coke had begun, but only in a small way. The quantity of charcoal iron then made was almost as large as both anthracite and coke iron. The following table, compiled from the reports of the American Iron and Steel Association, in which net tons are used because all their records were so kept until quite recently, gives the annual output of charcoal pig iron from 1854 to 1893:

Annual Output of Charcoal Pig. Iron.

Years.	Net tons.	Years.	Net tons.
1854	342,298	1874	576,557
1855	339,922	1875	410,990
1856	370,470	1876	308,649
1857	330,321	1877	317,843
1858	285,313	1878	293,399
1859	284,041	1879	358,873
1860	278,331	1880	537,558
1861	195,278	1881	636,838
1862	188,600	1882	697,906
1863	212,005	1883	571,726
1864	241,853	1884	458,418
1865	282,342	1885	399,544
1866	332,580	1886	469,557
1867	344,341	1887	578,182
1868	370,000	1888	558,789
1869	392,150	1889	644,300
1870	385,000	1890	703,522
1871	385,000	1891	646,200
1872	500,587	1892	602,136
1873	577,620	1893	493,204

The figures for the 12 months ending June 30, 1894, as given above, are 252,246 gross tons, or 282,516 net tons. It will be seen that these figures fall below those for 1878, when the iron trade was in a state of severe depression, and that it is necessary to turn back to 1865 to find a year of still smaller production. From 1854 to 1857 the annual output was considerably larger. From the panic of 1857 to the close of the civil war, charcoal pig iron was evidently under a cloud. After that period it developed rapidly,

suffering something of a backset after the panic of 1873, but attaining its largest proportions in the years embraced from 1880 to 1892. This was the halcyon period of the charcoal iron industry. Greatly improved furnaces were built in those sections of the country which were blessed with both good deposits of iron ore and an abundance of timber. Improved methods of furnacing were also introduced, and even old plants were coaxed into running out iron at a rate which startled the old timers in the charcoal business. So great was the economy effected in the consumption of charcoal per ton of iron produced that furnacemen in the Northwest almost persuaded themselves that the time was near at hand when the cost of making charcoal iron would be practically on a level with coke iron. But those golden days have passed and the cost of producing coke iron has meanwhile fallen so low that the gap between charcoal and coke iron appears wider than ever, and consumers of charcoal iron are steadily endeavoring to substitute the cheaper article for the dearer. The specially discouraging feature of this movement is that the success attending it is educating such consumers in the knowledge that charcoal iron is not indispensable, and as business revives they will probably not increase their consumption of such iron, but continue to use coke iron. The only way in which it seems possible for manufacturers of charcoal iron to recover the ground which they have lost is to reduce their cost of production so as to bring their selling price closer to that of coke iron. If this can be done, and it should be, the American charcoal iron trade will again become an important factor. But if charcoal furnacemen sit in the ashes of their dead hopes and merely look disconsolately at their silent plants, waiting for something to happen, the recovery of their past prestige will never be more than a dream.

"Organized" Labor.

The labor leaders of the day are creating a class distinction which seems to be completely at variance with their professed principles of elevating the workingman and improving his condition. In their speeches and manifestoes they ring the changes on "organized" labor, as if no other kind of labor were worthy of their consideration or should receive recognition from the public, to which they are constantly appealing. There is a concerted effort to create an undoubted aristocracy in the ranks of workingmen, a privileged class with well-established rights and immunities. Demands are made, not in the name of labor, but in the name of "organized" labor as represented in trades unions alone. The man who works for wages may be a most exemplary citizen in every respect, rearing a family to become ornaments of society and to add strength to the commonwealth, but if

he is not a member of any union he is utterly without place in the modern fabric of industry. The time was, and it is not far distant, when men were selected for political preferment or for responsible positions of a public character on the sole ground of their personal qualifications, and if the man so selected was taken from the ranks of the wage workers, no question was raised as to whether or not he represented a labor organization. Now, however, the man's fitness is subordinated to the great test of his fealty to a trade union. Only organized labor must be recognized, and a non-union man has no rights which any person is bound to respect. This is wholly wrong, as there are many men who are so situated that they cannot join unions or are not permitted to join them. The majority of wage workers are and will continue to be unorganized, and yet will do their proper share in developing and building up the nation, and are not to be ignored when the true interests of labor are under consideration.

The Lowering of Wages.

The tendency of wages, in sympathy with the tendency of prices for the past three years, is downward. The movement is resisted by all the means available to those who are obliged to work for others, but its force is irresistible. The most formidable strikes known in our industrial history have been undertaken in the hope of restoring past schedules, but they have either been successful in only a slight degree or they have proved inglorious failures. The trend of all values being downward, the price of labor goes down also. The recent coal and railroad strikes were crucial tests, and now that they have been met and passed the question seems to have been settled. Until the general condition of business improves there can be no restoration of wages to former standards, and there is no guarantee that further reductions will not have to be endured by those who are now working for much less than they consider their services worth. Railroad revenues are still shrinking, manufacturers' incomes are still diminishing, merchants' sales are still falling off, and it is only reasonable to suppose that employees will have to bear a greater part of the burden of hard times than has yet been imposed upon or assumed by them.

In certain occupations, which are hedged about by agreements with a time limit, no change in rates can be made. The workmen in such trades, however, are likely to be losers in the amount of their yearly income from the irregularity of employment. Numberless other occupations exist, however, in which time agreements are not made and wages can be changed by mutual consent whenever conditions may seem to require a rearrangement. In such lines the lowering tendency is now proceeding. It is not forced spe-

cially by employers, but is assisted by employees themselves. For instance, workmen whose usual wages are 35 cents per hour in good times are offering to work for 20 cents in order to get employment. This is being done in a Western city in which labor is supposed to be as strongly organized as in any other place in the country. Lack of regular employment is, of course, the cause. After a man has averaged less than half time for a year he concludes that more steady work must be had if possible. Having only his labor for sale he proceeds to offer it at a bargain, in the hope that he may find an appreciative buyer. Probably the expectant employer has helped the downward plunge in wages by making a low bid for the workman's services, but he too is seeking work and is struggling to secure contracts on which he must reduce his costs. This acceptance of hard times conditions is believed to be widespread, and will shortly affect the great mass of wage workers unless there is a radical change in general business, which is unfortunately not to be expected in the near future. Those who maliciously assert that employers are taking advantage of the times to reduce wages falsify the circumstances. An occasional instance may be found in which a man will wantonly grind the faces of those dependent upon him, but it is the exception and not the rule. Reductions in wages are almost invariably the last resort to reduce costs. We have sufficient faith in human nature to believe that employers generally are more pleased when they are able to increase the compensation of their employees than when they find themselves obliged to make a reduction.

PERSONAL.

Charles Kennedy, ex-superintendent of the Union Rolling Mill Company, Cleveland, Ohio, has accepted the position of superintendent of the Indiana Iron Company, Muncie, Ind.

M. M. Garland, president of the Amalgamated Association, returned to Pittsburgh last week from a visit to Philadelphia, during which several lodges of tin workers were organized.

Wm. Young, formerly superintendent of the masonry department at the Edgar Thomson Steel Works, Bessemer, Pa., has resigned to take charge of the masonry work in connection with the new plant now under erection by the Johnson Company, Lorain, Ohio.

The changes reported in the Tennessee Coal, Iron & Railroad Company are confirmed. John Dowling is general superintendent of furnaces, Henry Debardeleben, Jr., is furnace superintendent at Bessemer and James Shannon at Ensley. W. L. Johns is superintendent of the Blecton and Blue Creek mines. The selling department is moved to Nashville, in charge of Mr. Bowser, while Mr. Roberts and all officers at Bessemer and Ensley are moved to Birmingham and consolidated. Mr. Roberts has charge of the commercial departments of the company. Further changes are predicted.

Washington News.

(From our Special Correspondent.)

WASHINGTON, D. C., August 7, 1894.

The Sellers Shrinking Process.

The *Iron Age* some time since gave a somewhat detailed account of the Sellers invention for the shrinkage of jackets on large guns in a single piece by means of a portable furnace in which the jacket is placed. Being raised to the required degree of heat, the furnace and jacket, being hoisted to the necessary height, are lowered over the tube while the latter is being subjected to a flow of cold water on the inside. After much preliminary details and application of theoretic methods the new and ponderous appliance in great gun making was applied to the experimental nickel steel gun at the Washington Naval Arsenal several days ago, and was in a great degree satisfactory. In this case the inner jacket was placed in the portable furnace and heated, the whole was then hoisted so as to clear the tube which was in position in the pit. The movement was at the rate of 3 feet per minute and increased to 8 feet to the minute at the end. The outer jacket may be placed by the same process.

The Sellers system, as it is called, will be given every opportunity for a thorough test, and will be reported upon with scientific accuracy and detail.

The naval ordnance experts, as already stated, have not been inclined to believe that the system will be of sufficient economy as a substitute for present methods. The first attempt, however, has had the effect of somewhat modifying this opinion.

The Carpenter Projectile.

The vigilance of the administrative branches of the Navy Department in closely inspecting the output of guns, projectiles and armor is to be commended, but the acceptance of the statements of discharged employees as the basis of expensive investigations shows a decided weakness.

This time it is the Carpenter Steel Works, in the manufacture of armor piercing projectiles. The Carpenter projectile has made its own record, the idle talk of a disgruntled discharged employee to the contrary notwithstanding. As was remarked at the department, "the recent tests of 17 and 18 inch and other armor plates of the very highest quality shows of what sort of stuff the Carpenter and sterling shells are made."

It is too bad that workmen without data can be permitted to come forward and throw discredit upon a class of work which has not only gone through actual ballistic tests, but is the wonder and admiration of the world. After a while these annoyances will seriously interfere with the Government securing any reputable concerns to do this very delicate and costly work. The machinist who has talked about the manufacture of Carpenter projectiles will be given a chance to air his views and obtain notoriety.

The machine gun trial board have completed their work and are compiling a most elaborate report. They expect to be at this part of the work for several days. The tests were very severe and developed all the merit there was in each gun. When this report is fully completed it will be one of the most exhaustive on the subject, and is likely to have scientific and practical value

not only in this but in foreign countries. The American, English, French and Austrian guns will thus have their merits very distinctly set forth.

John Dialogue & Son of Camden, N. J., have built and just delivered to the New Jersey Central Railroad Company at New York a new iron tug, "Nottingham," said to be one of the largest vessels of her type. The new vessel is 138½ feet long, 27 feet 4 inches beam and 17 feet 3 inches depth of hold. Her engines are of the triple-expansion type, having three cylinders of 16 24 and 41 inches in diameter and 50 inches stroke, giving her about 1000 horse power. There is bunker capacity for 175 tons of coal. She has a steel hull, steam steering gear and windlass and electric lights. The peculiar feature of the vessel is that she has two smokestacks.

The annual convention of the National Association of Iron and Steel Workers commenced at Youngstown, Ohio, on Saturday the 4th inst. John D. Carey presided and the greater part of the day was taken up in the disposal of routine business. A few changes were made in the constitution, which, it is stated, will enable the members to expedite business and increase the membership. The above organization is composed almost entirely of finishers employed in mills in Ohio, Pennsylvania and Indiana.

Jacob Meurer of the tin plate manufacturing firm of Meurer Bros. Company, Brooklyn, has devised and constructed a labor saving machine by which the tinned sheets, as they come from the cleaning and dusting machines, are cut, accurately trimmed, counted and boxed. The machine is, we understand, capable of disposing of the product of ten sets, and only requires the attendance of one boy to feed it with the tinned sheets. Mr. Meurer is now engaged in developing some further improvements in the line of tin plate machinery, designed to facilitate the handling and cleaning of the sheets.

A patent process for improving pig iron after it is cast is being tried at the Little Bell furnace in Bessemer. It is called the Tortimolite process, and consists in running pig metal from the furnace into chills, heavily coated with a wash of impure graphite, apparently, containing about 75.11 per cent. of carbon. The metal is supposed to absorb some of the carbon and become stronger and softer, probably somewhat on the principle of cementation. It makes a very smooth clean pig, shows slightly less chill than untreated metal in chills. Tests so far made seem to indicate a gain of strength in test bar and in pig, and a slight increase of carbon in the metal as well as slight changes in the other chemical constituents. Tests made at the Howard Harrison Pipe Works of this metal, as compared with untreated pig of the same cast, are said to have shown decided superiority in fluidity and strength for the Tortimolite metal. The experiments are conducted by Chicago parties.

A. Adler, a merchant of New Orleans, La., died on the 18th ult., aged 57 years. Mr. Adler had been engaged in the hardware and junk business in that city for nearly 25 years, and was well known to the trade in that line.

An Increase in Pig Production.

As expected the current active capacity of the blast furnaces has been increased quite considerably through the increased supply of coke which affected also districts classed among the anthracite furnaces, notably in Central Pennsylvania. It is well known that if they could depend upon a regular supply of fuel the producers in the Mahoning and Shenango valleys would also generally resume.

On August 1 the active furnace plant, grouped according to fuel used, possessed the following weekly capacity:

Fuel.		
Anthracite.....	36	17,186
Coke.....	79	94,707
Charcoal.....	20	3,463

Totals August 1.....	135	115,356
Totals July 1.....	107	85,950
Increase or decrease.....	+ 28	+ 29,406

The weekly product of all the furnaces on August 1 compared as follows with that of preceding periods:

	Furnaces in blast.	Capacity per week. Gross tons.
August 1, 1894.....	135	115,356
July 1.....	107	85,950
June 1.....	88	62,517
May 1.....	127	110,210
April 1.....	144	126,732
March 1.....	133	110,168
February 1.....	125	99,242
January 1.....	130	99,087
December 1, 1893.....	130	99,379
November 1.....	117	80,070
October 1.....	114	73,895
September 1.....	125	83,434
August 1.....	169	107,042
July 1.....	220	153,762
June 1.....	244	174,029
May 1.....	251	181,551
April 1.....	255	178,858
March 1.....	255	176,978
February 1.....	251	171,201
January 1.....	246	173,068
December 1, 1892.....	246	176,271
November 1.....	244	171,082

The status of the anthracite furnaces was as follows:

Anthracite Furnaces, August 1, 1894.

Location of furnaces.	Total number of stacks.	Number in blast.	Capacity per week.	Number out of blast.	Capacity per week.
New York.....	18	2	721	16	5,568
New Jersey.....	11	2	825	9	3,671
Spiegel.....	3	2	135	1	60
Pennsylvania:					
Lehigh Valley...	44	10	3,800	34	12,926
Spiegel.....	1	0	0	1	60
Schuylkill Valley.	27	5	3,027	22	10,002
U. Susquehanna Valley	14	4	2,410	10	3,182
L. Susquehanna Valley	16	3	2,200	13	1,794
Spiegel.....	1	0	0	1	525
Lebanon Valley..	15	8	4,038	7	2,953
Totals.....	150	36	17,186	114	37,761

For a number of months past our records of active anthracite furnaces show the following:

	Furnaces in blast.	Capacity per week.
August 1, 1894.....	36	17,186
July 1.....	32	13,266
June 1.....	30	12,139
May 1.....	35	17,807
April 1.....	34	17,739
March 1.....	32	16,618
February 1.....	27	13,627
January 1.....	29	13,081
December 1, 1893.....	32	16,188
November 1.....	34	16,166
October 1.....	34	15,338
September 1.....	43	20,758
August 1.....	51	23,572
July 1.....	63	29,268
June 1.....	60	33,916
May 1.....	67	33,168
April 1.....	72	34,641
March 1.....	74	34,773
February 1.....	74	32,871
January 1.....	70	32,772

No changes of consequence have taken place in Eastern Pennsylvania. In the central part of the State, where the furnaces now use practically all coke, there has been some resumption of work. In the Lebanon district the Lackawanna Company have blown in the Colebrook Furnaces acquired by them, and Robeson also has gone to work. On the 1st inst. the Pennsylvania Steel Company had three furnaces blowing.

The position of the coke furnaces was as follows:

Coke Furnaces, August 1, 1894.

Location of furnaces.	Total number of stacks.	Number in blast.	Capacity per week.	Number out of blast.	Capacity per week.
New York.....	7	1	1,235	6	5,069
Pennsylvania:					
Pittsburgh District.....	24	21	35,717	3	4,310
Spiegel.....	2	1	1,200	1	900
Shenango Val.	16	2	2,223	14	13,801
Juniata and Conemaugh Valley.....	16	5	5,363	11	7,508
Spiegel.....	1	0	0	1	950
Youghiogheny Valley.....	3	1	745	2	1,465
Miscellaneous.....	4	0	0	4	2,500
Maryland.....	5	0	0	5	6,000
Wheeling District.....	8	4	4,393	4	3,987
Ohio:					
Mahoning Val. Central and Northern.....	14	1	1,377	13	10,647
Hocking Val.	14	1	720	13	3,041
Hanging Rock	14	2	393	12	3,059
Indiana.....	2	0	0	2	412
Illinois.....	19	7	14,200	12	12,040
Minnesota.....	1	0	0	1	629
Wisconsin.....	5	1	1,227	4	2,938
Missouri.....	6	0	0	6	3,572
Colorado.....	3	2	1,680	1	600
The South:					
Virginia.....	22	9	4,254	13	7,735
Kentucky.....	7	1	425	6	2,419
Alabama.....	38	11	10,850	27	14,070
Tennessee.....	14	4	3,390	10	4,406
Georgia.....	2	1	664	1	600
N. Carolina.....	1	0	0	1	97
Totals.....	259	79	94,707	181	118,014

As compared with previous months the active coke furnaces make the following showing:

	Furnaces in blast.	Capacity per week.
August 1, 1894.....	79	94,707
July 1.....	53	68,878
June 1.....	40	47,104
May 1.....	75	88,580
April 1.....	92	105,011
March 1.....	83	89,794
February 1.....	80	81,970
January 1.....	80	81,997
December 1, 1893.....	72	78,241
November 1.....	57	58,820
October 1.....	52	53,061
September 1.....	54	56,976
August 1.....	84	77,907
July 1.....	122	117,072
June 1.....	140	132,079
May 1.....	146	139,768
April 1.....	145	135,488
March 1.....	145	133,579
February 1.....	140	129,396
January 1.....	138	131,731

In the Pittsburgh district production is rapidly approaching full capacity, only four being idle on the first of this month. Carrie No. 1 went in about the middle of July, No. 2 of the same plant having been producing some time before. Edith started on the 10th ult., and one Monongahela on the 16th. One Shoenberger was fired up early in the month and the other during the latter part. Another Eliza was blown in the last week of July.

At Buffalo, Niagara resumed on the 30th. In the Shenango Valley, Rosena and Stewart were at work at the close of the month, while in the Mahoning Valley, Mattie went into operation. In the Wheeling district Jefferson, Mingo, Riverside and Belmont started in July and one Ashland in Kentucky also resumed.

In the Chicago district the July product was of course very small, owing to the local troubles, but the furnaces were again in operation toward the close of the month.

In the South Dora is again running in Virginia, one Sloss, one Bessemer and Spathite in Alabama, while in Tennessee Chattanooga went out for repairs on the 12th ult.

The position of the charcoal furnaces was as follows:

Charcoal Furnaces, August 1, 1894.

Location of furnaces.	Total number of stacks.	Number in blast.	Capacity per week.	Number out of blast.	Capacity per week.
New England.....	13	2	152	11	895
New York.....	5	3	183	3	363
Pennsylvania.....	13	1	43	12	870
Maryland.....	6	1	117	5	391
Virginia.....	13	0	0	13	827
Ohio.....	9	4	249	5	382
Kentucky.....	3	0	0	3	290
Tennessee.....	9	1	100	8	991
Georgia.....	3	1	295	2	230
Alabama.....	13	2	812	11	2,575
Michigan.....	20	5	1,385	15	4,521
Missouri.....	2	0	0	2	597
Wisconsin.....	4	0	0	4	2,112
Texas.....	4	1	125	3	470
Washington.....	1	0	0	1	100
Oregon.....	1	0	0	1	200
Totals.....	119	20	3,463	99	15,724

As compared with previous months the record of active charcoal furnaces stands as follows:

	Furnaces in blast.	Capacity per week.
August 1, 1894.....	20	3,463
July 1.....	22	3,806
June 1.....	18	3,274
May 1.....	17	4,023
April 1.....	18	3,982
March 1.....	18	3,754
February 1.....	18	3,645
January 1.....	21	4,099
December 1, 1893.....	26	4,050
November 1.....	26	5,084
October 1.....	28	5,496
September 1.....	28	5,700
August 1.....	34	5,563
July 1.....	35	7,224
June 1.....	34	8,034
May 1.....	38	8,595
April 1.....	38	8,729
March 1.....	36	8,623
February 1.....	37	8,934
January 1.....	38	8,865

During July Boiling Springs in Pennsylvania was blown out, Eagle in Wisconsin was banked and Round Mountain in Alabama was put out for ten days for repairs. Excelsior in Michigan started last month, and Sligo in Missouri resumed on the 2d inst.

Stocks.

The position of stocks, sold and unsold, as reported to us August 1, was as follows, the same furnaces being represented as in former months:

	June 1.	July 1.	August 1.
Stocks.	Tons.	Tons.	Tons.
Anthracite pig..	141,712	128,825	123,913
Coke pig.....	3 2,427	231,430	228,902
Charcoal pig.....	225,626	213,730	220,033
Totals.....	639,765	573,985	567,848

It must be remembered, as we have frequently stated in connection with these reports of stocks, that they do not include the quantities held by the large steel companies East and West.

What is probably the largest consignment of structural material and plates received in one day by any one firm in New York was handled last week by A. R. Whitney & Co. The quantity involved was 1800 tons, received from the Homestead Works.

MANUFACTURING.

Iron and Steel.

The manufacture of rolls has been tried at the Homestead Steel Works, Homestead, Pa., and the experiments are said to have been entirely successful.

At Chester, Pa., last week, a hearing was had before a master on the question of the selling of the plant of the Wellman Iron & Steel Company, at Thurlow, Pa. The matter was postponed for a further hearing until September 20.

A slight explosion occurred last week at Clinton Furnace of the Clinton Iron & Steel Company, at Pittsburgh, caused by the breaking of a jacket, thus allowing the molten metal to run out. The furnace was idle for a few days while necessary repairs were being made.

The Pittsburgh Architectural Iron Works, Incorporated, have begun the erection of a new plant at Canonsburg, Pa., which will occupy about 7 acres of ground. The plant will consist of a bridge and construction shop, 175 x 360 feet in size, general foundry, 75 x 160, blacksmith and boiler house, 40 x 100 feet, and pattern and store house, 40 x 100 feet. All the buildings will be of iron, and will be as nearly fire proof as possible. Work on the construction is being pushed as rapidly as possible, and it is expected to have the buildings completed about November 1 next.

At a special meeting of the Board of Directors of the Wheeling Steel & Iron Company, Wheeling, W. Va., it was decided to make some extensive additions and improvements to Top Mill Furnace of that concern. Three new stoves and other additions to equipment will be made. Martin's Ferry Furnace of the Wheeling Steel & Iron Company, located at Martin's Ferry, Ohio, will be put in operation just as soon as a plentiful supply of coke can be secured.

Seneca Furnace of Salem Iron Company, at Leetonia, Ohio, is being rebuilt and three new stoves are being added. The furnace will likely resume blast during the latter part of this month. In rebuilding, the size of the furnace has been increased to 17 x 76 feet.

The Wellston Iron & Steel Company have been incorporated at Wellston, Ohio, and have recently purchased Wellston Furnace at that place which will be put in blast on foundry iron about the middle of this month. The officers of the new concern are J. C. Clutts, president; H. A. Marking, vice-president, and J. C. Vogleson secretary, treasurer and general manager.

The annual meeting of the stockholders of the Union Iron & Steel Company, Youngstown, Ohio, was held recently and the following directors were elected: M. C. Wick, Henry Wick, John C. Wick, George D. Wick, Thomas H. Wells, Thomas Parrock, W. E. Taylor. The directors elected Myron C. Wick, president; George D. Wick, vice-president; W. E. Taylor, secretary and treasurer.

As soon as the business situation will justify it, the extensive plant of the Sharon Steel Casting Company, Sharon, Pa., which has been idle for some time, will be put in operation. This concern was absorbed by the American Steel Casting Company and Daniel Egan, president, has also been made president of the American Steel Casting Company.

The strike of the puddlers at the Sligo Rolling Mill of Phillips, Nimick & Co., at Pittsburgh, for an increase in the price of boiling from \$3.60 to \$4 per ton is not causing the firm very much inconvenience. The entire plant of puddling furnaces is being operated single turn, and as soon as new men are secured a number of the furnaces will go on double turn.

Last week every department of the plant of the Brown, Bonnell Iron Company, Youngstown, Ohio, was in full operation on double turn for the first time in some months. During this and next week the plant will be idle, undergoing repairs and stock taking.

The New Castle Steel & Tin Plate Company, New Castle, Pa., recently added to their equipment two 18-foot boilers, 84 inches in diameter, and are now running six mills full.

It is stated that a tin plate company have agreed to locate in New Lisbon, Ohio, if the citizens at that place will secure to the concern a tract of land at a reasonable price,

and then buy from them 300 lots at \$200 each. Four buildings are proposed, and 200 men are to be employed. Charles M. Bray, secretary and mechanical engineer of the Lloyd Booth Company, of Youngstown, Ohio, is representing the projectors in the preliminary negotiations. Others interested in the new venture are W. T. Graham, B. M. Caldwell and J. J. Holloway, of the Aetna-Standard Iron & Steel Company, Bridgeport, Ohio.

At a recent meeting of the stockholders of the Weston Furnace Company, operating Weston Furnace at Manistique, Mich., J. D. Mersereau, formerly treasurer, was elected president; M. H. Quick was chosen vice-president; W. H. Hill, formerly vice-president, was made treasurer, and H. Duvall, secretary, was re-elected.

Wallace, Banfield & Co., Limited, operating the Irondale Rolling Mills at Irondale, Ohio, manufacturers of tin andterne plate, are making some extensive improvements at their plant, which are expected to increase the present capacity about one-fourth. The present equipment is being increased by the addition of one Mesta patent pickling machine, to be furnished by the Leechburg Foundry & Machine Company, Pittsburgh, and three new heating furnaces are also under erection. The old original sheet mill is being torn down and is being replaced by a frame structure covered with corrugated iron, which will be made as nearly fire proof as possible. The large engine is being repaired and a new cylinder will be added, 36 x 60 inches in size. A new fly wheel will also be put in which will weigh about 60 tons. The pickling machines are being repaired and other minor improvements are under way.

The plate mill and forge of the Otis Steel Company, Limited, Cleveland, Ohio, have been started up, giving employment to about 500 men.

The Detroit Steel & Spring Company, operating the Detroit Steel & Spring Works, at Detroit, Mich., signed the Amalgamated Association scale last week.

Last week eight furnaces in the plant of the Keystone Rolling Mill Company, at Pittsburgh were idle on account of the refusal of the firm to advance wages for working scrap iron from \$1.60 to \$1.75 per ton. New men will be secured and the furnaces will be put in operation again as soon as possible.

The furnace of the Spathite Iron Company, at Florence, Ala., is again in blast, turning out about 100 tons per day.

At Blandon, Pa., the Blandon Rolling Mill has resumed operations after several weeks' idleness on account of having no coal.

Round Mountain Furnace, at Round Mountain, Ala., recently blew out for ten days to make repairs.

The charcoal furnace of the Sligo Furnace Company, at Sligo, Mo., blew in August 2.

Mattie Furnace of the Girard Iron Company, Girard, Ohio, resumed blast July 28.

Lawrence Furnace, at Culbertson, Ohio, operated under lease by the John Peters Iron Company, started up July 31.

The Wellston Furnace Company, at Wellston, Ohio, will blow in one of their furnaces on the 12th inst.

Niagara Furnace, Tonawanda Iron & Steel Company, North Tonawanda, N. Y., blew in July 30, having been banked two months and twenty days for lack of coke.

Landon Furnace, Chapinville, Conn., will shortly blow out.

The rolling mill of the Coleman Shields Company, Niles, Ohio, has resumed. It is said that every manufacturing concern in Niles is now running full time.

The Paddock-Hawley Iron Company will remove in September to their new building now in course of erection at the corner of Tenth and Spruce streets, Chicago. The new structure, which is seven stories high and covers a space over 130,000 square feet, is situated upon a lot 125 x 160 feet, and has railroad track connections in the rear. It is stated that it will be the largest building under one roof used for mercantile purposes in Chicago, except the Cupples Real Estate Company's building.

The Fairmount Steel Works, operated by Alex. Foster & Co., at Twenty-third and Spring Garden streets, Philadelphia, will be moved to a new location at Twenty-third street and Allegheny avenue, on the line of the Norristown branch of the Reading Railroad, where a new plant will be erected

on a tract of ground 120 x 225 feet. A number of small houses for the use of the workmen in the steel works will be erected later on in the neighborhood of the establishment.

The Richmond Iron Works' furnace at Van Deusenville, Mass., is being put in repair preparatory to starting up in the fall.

Having adjusted the difficulty with their employees, the Susquehanna Iron Company's rolling mill, at Columbia, Pa., has resumed operations with eight furnaces. The other furnaces will be placed in operation at an early date.

The engine house of No. 2 Lebanon Furnace, at Lebanon, Pa., has been burned, entailing a loss of \$3000. The operations of the furnaces will not be interfered with.

The Lukens Iron & Steel Company are erecting a new machine shop in connection with their steel works, at Coatesville, Pa.

The strike of the puddlers in the plant of the Pittsburgh Forge & Iron Company of Pittsburgh, with mills in Allegheny, Pa., against a reduction in the price of boiling from \$4 to \$3.60 per ton has been declared off. The firm have notified their puddlers that they will pay the regular Amalgamated Association scale rate of \$4 per ton.

Furnaces Nos. 1, 3 and 4 of the Pennsylvania Steel Company, Steelton, Pa., are in operation. No. 2 Furnace is undergoing repairs and will soon be ready for blast.

No. 1 Furnace of the Thomas Iron Company, at Hokendauqua, Pa., was put in blast last week.

Machinery.

The Pierpoint Boiler Company, Pittsburgh, Pa., manufacturers of Pierpoint water tube boilers, recently received a contract for 500 horse-power of this type, to be shipped to the Philadelphia Natural Gas Company, at Murraysville, Pa. The same firm are erecting boilers of 2500 horse-power in the new shops of the Westinghouse Electric & Mfg. Company, at Brinton, Pa. They recently shipped a 200 horse-power boiler to the Lustre Mining Company, at Jimenez, Mexico, also a 100 horse-power boiler to the Keystone Mining & Mfg. Company, at Thomasville, N. C.

The Central Machine Works, in North Minneapolis, Minn., were burned on the 27th ult., causing a loss of about \$6000, partly covered by insurance.

The Excelsior Machine & Cleveland Punch and Shear Company, Cleveland, Ohio, have changed their corporate name to the Cleveland Punch & Shear Company.

The machine shops of the New York, Pennsylvania & Ohio Railroad, at Meadville, Pa., which have been closed down for about a month, have resumed operations on nearly full time, giving employment to about 300 men.

The establishment of George E. Nye, a manufacturer of steam pumps at Canal and Washington streets, Chicago, was closed last week on executions issued on two judgments by confession entered in the Circuit Court. One judgment was in favor of Simon E. Stein for \$6739, and the other of Frank E. Nye for \$4410. Mr. Nye has been in business in Chicago for a number of years and his pumps have steadily grown in favor.

The Marinette Iron Works Company of West Duluth, Minn., have been awarded the contract for building additional machinery for the Ironton Structural Steel Company. This comprises rolling mill equipment and two large engines. The Marinette Iron Works Company now have a great deal of work on hand, much of which is the result of mining operations on the Misabe range.

The Ferracute Machine Company of Bridgeton, N. J., manufacturers of presses and dies, are running on full time and are filling a number of orders for machinery from their new patterns. Among their most recent orders are six punching presses for a new cycle fitting factory in Ohio, a large round bed press for cutting armature disks, with a complete set of dies, and also a smaller press with notching attachment for the armature disks, for a motor factory in Ohio. They are also fitting up a factory for manufacturing miners' lamps, and another for a new toy, and they have recently completed several drawing presses for making deep steel shells, lantern work, tinware, &c., for various firms over the country. They embody a great many improvements in their new presses and have a new form of clutch which is extremely simple and durable. They are about get-

ting out a new catalogue describing 300 different styles of presses they build.

The Sebastian-May Company, Sidney, Ohio, advise us that on August 1 they made a shipment of an entire carload of lathes to Robert Boker & Co., Mexico City, Mexico, via the Cincinnati, Hamilton & Dayton Railroad. The lathes are of assorted sizes and finished specially for that trade.

J. M. Seibert, formerly a director in the Thomas K. Carey & Bros. Company, Baltimore, is now to be found at 1620 Haworth street, Frankford, Philadelphia. He is looking after the interests of the Putnam Machine Company in the States of Pennsylvania, Delaware, Maryland and New Jersey, and is calling attention to the new line of extra heavy tools made by that company. Notwithstanding the dull times he reports a fair business for the first half of the year.

Armitage, Herschel & Co. of North Tonawanda, N. Y., are building a new foundry to replace the one destroyed by fire a short time since.

Ford & Donnelly of Kokomo, Ind., encouraged by the large amount of work done at their foundry and machine shops, have decided to erect a branch factory at Montpelier, Ind.

The Lowell Machine Shop, Lowell, Mass., recently filled an order from Tokato & Co. of New York for \$53,000 worth of machinery for the Shanghai Cotton Cloth Mill Company of China.

The Birmingham (Conn.) Iron Foundry have contracted for an addition to their plant in the shape of a structure 168 x 76 feet, one story high.

A fire in the machine shop of Albert M. Bowers, Newark, N. J., caused a loss of \$12,000.

The Swamscott Machine Company of South Newmarket, N. H., now in the hands of a receiver, will wind up their affairs by a sale of their property. Amos Paul, the company's president for nearly 50 years, is named as a probable purchaser.

The ornamental iron works of D. Pettit & Co., 1217 Callowhill street, Philadelphia, have been destroyed by fire. The loss is \$15,000 on machinery and \$10,000 on patterns; fully insured.

The Fulton Truck & Foundry Company have begun work in their new plant at Mansfield, Ohio. The machine shop is a brick building, 60 x 175 feet, and the foundry, not yet built, will be 100 x 225 feet. The company manufacture steel tired railway wheels and specialties appertaining thereto.

With a view to extending their storage facilities at Chicago, the Lidgerwood Mfg. Company of New York have removed their office from the old storehouse, 34 to 36 West Monroe street to the Old Colony Building, Chicago.

Elmer Harrold, F. H. Grove and C. G. Wilderson of Columbiana, Ohio, have entered into copartnership relations for the establishment of a manufacturing machine shop, under the firm name of the Crescent Machine Company. The work of erecting suitable plant will begin at once, and the firm hope to be in position to begin operations by November 1.

Hardware.

Wood, Smith & Co., Fort Plain, N. Y., are now pushing the erection of buildings for a large axle factory at Chicago Heights, Ill., and expect to have it in operation about September 15, in time for the season of 1894-1895. Chicago Heights is about 26 miles from Chicago and has excellent shipping facilities, located as it is on the Chicago & Eastern Illinois, Michigan Central and Elgin, Joliet & Eastern railroads. The Chicago & Eastern Illinois gives direct communication with Chicago and all points South, Southeast and Southwest, the Michigan Central to Michigan and points East, while the Elgin, Joliet & Eastern forms a belt line around Chicago, connecting closely with every one of the 38 railroads entering the city. This new factory will be known as the Western Axle Works, and their product will be branded "Western." It will be equipped throughout with every modern appliance for producing axles economically and well and will have a large capacity. The well-known standard quality of the Fort Plain goods will, we are advised, be maintained, and axles of every description will be manufactured. Special attention will be given to interchangeable goods in the different

patterns, furnishing them to duplicate any known kind, style or taper.

Turner Strobridge, president, and L. R. Strobridge, vice-president, of the Logan & Strobridge Iron Company, New Brighton, Pa., manufacturers of hardware, have sold out their interests in that concern to J. H. Logan, who has not had any connection with the company for some time past. The firm will be reorganized in the near future with J. H. Logan, president, and C. G. Robinson, secretary and treasurer.

The Edwin Bell & Sons Company of Warren, Ohio, are said to be the largest manufacturers of nail kegs in the world. They operate seven factories, located in Pennsylvania, Ohio and Indiana. When running on full time they employ about 350 hands.

The Peters Cartridge Company, Cincinnati, Ohio, are busily engaged in completing one of the largest metallic cartridge plants in the country, located at Kings Mills, on the Little Miami division of the Pennsylvania Railroad. The plant consists of a number of separate structures, whose aggregate length will be over 1000 feet and the average width 34 feet, two and three stories in height. The buildings are now about completed and awaiting the setting up of the necessary machinery, which will be of the highest type and as near perfection as mechanical skill and ability can produce. The plant, it is expected, will be ready for full operation within the next 60 days.

Miscellaneous.

The Shiffer Bridge Company of Pittsburgh, Pa., have just closed contracts for the erection of a cupola house and a dry bottom house for the new plant of the Johnson Company, at Lorain, Ohio. They have also secured a contract for the erection of a steel roof for the Hennepin County Court House, at Minneapolis, Minn. The firm have opened a branch office in Room 1123, Betz Building, Philadelphia.

Canadian Notes.

The consumption of iron and steel in Canada, judged by the state of the industries that use those materials, is not up to its usual summer mark. Few of the manufacturers are driven with orders, many of them are barely kept going, and most of them can afford to remain shut down a long time for repairs. It is a dull summer, but everybody is satisfied it might easily be worse. Faith in the future acts as a spur to productive operations that would slacken up if only the present were looked to. There is a growing feeling that we are near the turning point and that now is the time to buy material and get it made up at low labor cost. The strongest concerns appear to be acting on this view. There is little doubt that the profits on the half year's business are in many cases low. The manufacturers of harvest machinery and tools and other agricultural implements had laid in the material for their summer output before the tariff was revised. They had to sell them at a price lower by the reduction in the duty, which was 35 per cent. ad valorem and is now 20 per cent. This difference was lopped off their profits, for they could not set against it the reductions made in the duty on their material, as that was bought before there were any reductions. They did a fair season's business as to volume, for the prices of binders, &c., were far below those of any former season. The material was cheaper, it was further lowered in cost by reductions in duty, and then the manufactured article was subject to a lower duty. Even against the stress of hard times there was, therefore, a good business done in the products of agricultural implement shops. But it was divided this year with United States manufacturers, whose binders were introduced at various points.

Our rolling mills appear to be able to produce all the merchant bar we want, despite the gloomy view they took of the extra duty on wrought scrap. So far, however, they are operating under only a part of the addition, the duty being raised to \$3 a ton this year and will be raised to \$4 next year. The mills have a choice of using scrap under the extra duty or using our own puddled bar. They prefer the former up to the present.

The pig iron consumed in this country now comes from two sources almost exclusively—that is, from our own furnaces and from those of the United States. Britain furnishes very little of it. It hardly pays to carry British iron into the interior, and it no longer finds a large market in the maritime parts of the country. There, in fact, as soon as it is landed it meets the great smelting works of the country, for our largest furnaces are in Nova Scotia. The Nova Scotia iron sells as far inland as Toronto and Hamilton, having pushed its way against both British and United States irons. The latter makes have the advantage west of Montreal, however. Even in Montreal American iron has found a good reception this year, several carloads of No. 2 Niagara pig having been sold there last month at \$12.50, in bond on track there. This is equal to \$17, duty paid net cash 30 days. Some Southern iron costing \$12.25 in bond on track, equal to Middlesboro brands, was also disposed of in Montreal, but is not as suitable for the wants of the foundries.

New Brunswick is to become an iron producing province. A project is on foot to build two furnaces at St. John, with a capacity of 250 tons a day. Ore, limestone and coal are easily assembled at that point, and freight facilities for shipping into the interior provinces are favorable. Our hardware houses feel more strongly than they ever did before the pressure of United States competition. This they attribute to hard times south of the line. The lowering of our duties has met some American manufacturers half way, and the change to ad valorem duties in many cases has enabled importation that was not calculated upon. This is a direct consequence of the depression in the States. In wire, screws, and general shelf hardware we have had domestic supplies largely supplemented from across the line. A reduction in manufacturers' screw prices was necessitated the other day by American competition.

The Londonderry Iron Works of Nova Scotia stopped this summer for the first time in three years and a-half, for the purpose of making repairs.

Nova Scotia furnaces are all kept in blast and their iron is energetically pushed, but there is a stock of about 15,000 tons unsold. It is said the makers are determined to hold the Montreal market against American makers, even at a sacrifice of profit.

Our stove manufacturers are among those who take a more hopeful view of the future, and some at least are preparing for a good season's trade. Those in Ontario have furnished some good orders for American irons.

The Ontario Bolt & Forge Company, Mimico, Ontario, have gone into liquidation. It is expected the creditors will be paid in full.

Hardware merchants say that it is necessary to sell a third more goods to make their monthly statements total up as much as they used to.

The Iron and Metal Trades.

The business community is growing very impatient over the delay in Congress because the danger that the fall trade may be seriously interfered with is becoming imminent. The Iron trade has discounted the worst that may happen, so far as the Metal schedule is concerned, and is chiefly eager to experience the improvement in business which it is generally believed will follow the settlement, whatever shape it may take. The conviction is general that a good many negotiations have been held in abeyance preceding a decision, and that the Iron trade must share in any revival which may follow the present state of suspended animation.

There has been an improvement in the Coke situation, but a study of the direction which shipments take leads to somewhat puzzling results. One of the Valley furnaces is known to be paying \$1.50 for its fuel for August, and Foundry Coke is selling to dealers at \$2 at oven. Yet one contract for the balance of the year has been placed by a Valley furnace at \$1.10 with a smaller Connellsville interest.

Bessemer Pig continues in short supply for spot metal, but the demand is not urgent. Pittsburgh records a sale of 10,000 tons of low phosphorus Pig at a low figure.

Soft Steel is selling at \$16.90 @ \$17.25 for immediate shipment, in the Pittsburgh district, but the demand is on a moderate scale.

There has been some buying in Wire Rods, with transactions involving 2000 tons at \$24, Pittsburgh.

In Finished Iron and Steel the market is weaker. A very low price was made on 800 tons of Fish Plates in Chicago, and Steel Bars are known to have declined a little lately. A fair amount of bridge work is being closed, and a number of orders for architectural purposes are in sight. The weakening in Finished Material is partly explained by the fact that many mills are getting nearer to full capacity and are endeavoring to lower cost by capturing enough additional orders to run full.

Our Birmingham correspondent telegraphs that negotiations are going on to-day which aim at a settlement of the local coal mining trouble by the acceptance of a sliding scale based on the price obtained for No. 1 Pig Iron at furnace. Our records published elsewhere show a substantial increase of capacity of action in blast furnaces on August 1 over July 1. Since then the make has been further increased, chiefly by Bessemer furnaces.

Philadelphia.

Office of *The Iron Age*, 220 South Fourth St., PHILADELPHIA, Pa., August 7, 1894.

The market shows but little change from last week, and that not altogether of a favorable character. There is more business doing and in some articles there is a good deal of firmness, but in others there is a tendency toward slightly lower figures. The strong point is that there is more business around and more orders for forward delivery than there has been for a very long time past. It seems strange that rolling mill products should be weaker at the time when pig metal is firming up (especially steel material), but it is a fact nevertheless. The only explanation seems to be that mills are getting nearer to full time than they have been, and to hold that position they compete for business more closely and are willing to sacrifice a half tenth or thereabouts sooner than risk losing a good sized order. If Crude Steel holds its price, as it seems likely to do, it will be hardly worth while to cut prices of the finished article, but, of course, all depends which side the course of events will favor. At the moment it is impossible to say which way the market will turn, but with Bessemer scarce at \$12 and upward in Pittsburgh and at \$14 here, there is certainly no room for a decline either in Billets or their product, based on today's quotations. A few days more may throw some light on the subject, but in the meanwhile the situation is about as above mentioned.

Pig Iron.—The tendency of the market is somewhat favorable to holders. It is much easier to do business, and while no improvement in prices can be noted there is no difficulty in placing all the Iron that makers desire at figures recently ruling. Some good sized lots of Virginia mills Irons have been taken at \$10, delivered at interior points, and about \$10.65 for choice Lehigh, city delivery, and No. 2 at \$11.75 @ \$12. Furnaces are in first-class condition, some in fact have stopped taking orders until they see what course business is likely to take in the course of the next 30 days. Things are not in such shape as to warrant holders in asking an advance, but, as already mentioned, some are disinclined to accept further business at current rates, believing that in the near future prices will be better, and in any event they are sold pretty well up to the end of the year and can, therefore, afford to wait developments. Inquiries are said to foreshadow a good demand during the next 30 days, which, following liberal sales during the past couple of weeks, is very encouraging to makers of Pig Iron. General quotations for Philadelphia and nearby points are about as follows:

Bessemer.....	Nominal,	\$13.50 @ \$14.00
Standard No. 1 Foundry X.....	12.50 @	13.00
Standard No. 2 Foundry X.....	11.50 @	12.00
No. 2 Plain.....	10.75 @	11.00
No. 1 Soft.....	11.50 @	11.75
No. 2 Soft.....	10.75 @	11.00
Standard Gray Forge.....	10.50 @	10.75
Ordinary.....	10.25 @	10.50

Muck Bars.—Asking prices are \$20 and upward, f.o.b. sellers mills, although these figures are not being paid except for choice lots. Sales are reported at \$19.50 in other cases, and this quotation seems to be about what consumers are willing to pay for fair qualities.

Steel Billets.—Business is very slow for the reason that consumers are not willing to pay \$19.25 @ \$19.50 so long as they have material coming to them at \$1 or \$2 less. Holders appear to be

very firm, however, although it is intimated that bids at \$18.50 @ \$19 would be considered for deliveries during the last three months of the year. August and September shipments are firm at \$19 @ \$19.25, but with very light transactions.

Finished Material.—The volume of business is increasing, and all the plate mills report more work on hand than they have had for a year past, although, as a rule, three or four weeks would enable most of them to clean everything up. The Structural mills have enough to run them until pretty well on to the close of the year, and as there is in addition a good deal of small work coming in, prospects are regarded as very favorable. Prices, however, are not as firm as they were, and any order of decent size could be placed at a half-tenth to a tenth less than the figures ruling during last month. Some mills maintain their quotations, but others that are anxious to accumulate work make concessions, as above mentioned. Western mills are also competing for business, so that the outlook as regards prices is somewhat uncertain. General quotations are about as follows:

Grooved Skelp.....	1.25¢ @	1.30¢
Standard Refined Bars.....	1.25¢ @	1.35¢
Medium quality.....	1.15¢ @	1.20¢
Tank Steel.....	1.35¢ @	1.45¢
Heavy Plates.....	1.80¢ @	1.40¢
Shell.....	1.50¢ @	1.60¢
Flange.....	1.60¢ @	1.80¢
Angles.....	1.40¢ @	1.50¢
Beams and Channels.....	1.50¢ @	1.60¢

Old Material.—There is a better demand, but prices are irregular and it seems almost impossible to secure an advance, notwithstanding the larger volume of business. General quotations for lots delivered are about as follows:

Heavy Melting Steel.....	\$10.00 @	\$10.50
Light Melting Steel.....	8.00 @	8.50
No. 1 Wrought Scrap.....	10.50 @	11.00
Machinery Cast.....	9.50 @	10.00
Wrought Turnings.....	8.00 @	8.50
Cast Borings.....	6.25 @	6.75
Old Iron Rails.....	11.50 @	12.00
Old Car Wheels.....	9.50 @	10.00

St. Louis.

(By Telegraph.)

Office of *The Iron Age*,
Bank of Commerce Building,
St. Louis, August 8, 1894.

Pig Iron.—The demand for Pig Iron is not heavy and yet there is some improvement to be noted. There are more inquiries in the market and a number of round lots have been closed during the past week. Consumers are disposed to increase the size of their orders somewhat and there is a gradual diminishing of the carload business. Sales of 500 ton lots are not nearly so hard to make as they were 30 days since and the impression is gaining ground among consumers that the lowest prices have been already recorded and any change will be for the better. There is not likely to be any large business, but a gradual improvement in the demand now seems assured. No. 2 Foundry cannot be bought less than \$10.50 and there is some difficulty experienced in securing prompt shipments of this grade as the furnaces are nearly all sold up. We quote as follows for cash, f.o.b. cars St. Louis:

Southern Coke, No. 1 Foundry.....	\$11.00 @	\$11.25
Southern Coke, No. 2 Foundry.....	10.50 @	10.75
Southern Coke, No. 3 Foundry.....	9.75 @	10.00
Southern Car Wheel.....	16.50 @	17.00
Gray Forge.....	9.50 @	9.75
Ohio Softeners.....	14.00 @	14.50

Bar Iron.—Manufacturers report a steady improvement in the demand, and also say that prices are firmer. Stocks are exceedingly light in both jobbers' and consumers' hands, and they are now beginning to realize this fact. Mills are not booking orders very far ahead, as an early advance is anticipated. Jobbers report an increased trade and state that inquiries are quite numerous. Mills quote 1.20¢, while jobbers ask 1.35¢ for small lots from store.

Barb Wire.—There is a fair amount of business doing and prices are practically unchanged. The demand is not very heavy, however, and as mills are preparing to start up and more wire will be on the market, prices may weaken somewhat. At this writing \$1.85 @ \$1.90 is quoted for carload lots from mill, with 40¢ per hundredweight additional for Galvanized.

Wire Nails.—At \$1.20 for carload lots from mill the market seems stationary. Sales are moderately heavy and the outlook satisfactory for a good trade during the present month.

Rails and Track Supplies.—There is a slight movement in Old Iron Rails, which are now quoted at \$10.50. Steel Rails are dull at \$26.50 @ \$27. Track supplies are in good demand at the following prices: Splice Bars, 1.35¢; Spikes, 1.70¢ @ 1.75¢; Bolts, Square Nuts, 2¢; with Hexagon Nuts, 2.10¢; Steel Links and Pins, 1.60¢; Iron, 1.70¢.

Pig Lead.—The movement in Pig Lead has been disappointing. Indications pointed to a firm market at 3.40¢, but liberal offering carried the price downward and sales to-day were made at 3.20¢, with offerings at 3.22½¢. The market is hard to gauge and impossible to predict.

Spelter.—There is no change to note in this metal. No business doing and price about the same as last quoted—viz, 3.17½¢ @ 3.20¢.

Cincinnati.

(By Telegraph.)

Office of *The Iron Age*, Fifth and Main Sts. }
CINCINNATI, August 8, 1894. }

The market has been working under the stress of a scarcity of the grades of Pig Iron most in demand during the week and sellers have been able to obtain very full prices for the little they have had to offer, but the sales were mainly of single car lots, but sometimes ran up to 500 tons. There was a sale to-day of 1000 tons No. 2 Soft on the basis of \$7.25, f.o.b. Birmingham. There are indications that the production of Southern Iron will shortly be larger, but it is not expected that it will cause a decline in prices; in fact there seems to be assurances that all the available Pig Iron will be wanted in the early future at current if not at a little better prices. The stronger furnaces are indifferent sellers, for they have contracts to fill at pretty full prices, and if there was the usual demand for the finished product there would be a strong market for Pig Iron. The Northern furnaces are short of Coke and are not turning out much Iron, so that all offered in this market finds a market and at pretty full prices. Prices are not notably higher, and yet an advance is obtainable for small lots for

prompt delivery. Quotations are as follows:

Foundry.

Southern Coke, No. 1.....	\$10.25 @ \$10.50
Southern Coke, No. 2.....	9.50 @ 9.75
Southern Coke, No. 3.....	9.25 @ 9.50
Ohio Soft Stone Coal, No. 1.....	14.50 @ 15.50
Ohio Soft Stone Coal, No. 2.....	14.00 @ 14.50
Lake Superior Coke, No. 1.....	12.50 @ 13.00
Lake Superior Coke, No. 2.....	11.50 @ 12.00
Hanging Rock Charcoal, No. 1.....	16.00 @ 17.00
Hanging Rock Charcoal, No. 2.....	15.50 @ 16.00
Tennessee Charcoal, No. 1.....	13.00 @ 13.50
Tennessee Charcoal, No. 2.....	12.00 @ 12.50

Car Wheel and Malleable Irons.

Standard Southern Car Wheel.....	16.25 @ 17.00
Lake Superior Car Wheel and Malleable.....	16.25 @ 16.75

Forge.

Gray Forge.....	8.75 @ 9.00
Mottled Coke.....	8.50 @ 8.75

Chicago.

(By Telegraph.)

Office of *The Iron Age*, 59 Dearborn street, }
CHICAGO, August 8, 1894. }

The market shows no special improvement over last week, and in some respects ground has been lost. There is a tendency, however, among certain classes of buyers to take advantage of the very low prices now prevailing in making permanent improvements. Railroad companies would be much larger purchasers on this account if managers could perceive satisfactory revenues assured for the coming year. The crop uncertainty seems to be something of a barrier in this direction.

Pig Iron.—Local Coke Iron has sold to about the same extent as reported last week. Negotiations are also progressing for some round lots of Iron, which are expected to be closed this week. The very low price named on this class of Iron has been too tempting to resist, and it may be possible that some consumers here overestimated their requirements in making contracts. Much will depend on the improvement in general business during the coming fall and winter. Shipments have increased heavily during the week, as foundrymen are now endeavoring to make up for lost time during the recent railroad strike. Southern Coke Iron has sold in only small lots, as usual, but agents report that they are offered long time contracts, which their principals are not willing to accept. The Southern companies now running are not burdened with large stocks and believe in peddling out their Iron in small lots rather than to anticipate the future, which they believe will ere long bring about better prices. Not much business is reported in Lake Superior Charcoal Iron. Quotations are given as follows for cash:

Lake Superior Charcoal.....	\$14.25 @ \$15.00
Local Coke Foundry, No. 1.....	10.25 @ 10.50
Local Coke Foundry, No. 2.....	10.00 @ 10.25
Local Coke Foundry, No. 3.....	9.50 @ 10.00
Local Scotch.....	10.25 @ 10.50
Ohio Strong Softeners No. 1.....	13.00 @ 13.50
Southern Silvery, No. 1.....
Southern Silvery, No. 2.....
Southern Coke, No. 2.....	10.75 @ 11.00
Southern Coke, No. 3.....	10.50 @ 10.75
Southern, No. 1, Soft.....	10.75 @ 11.00
Southern, No. 2, Soft.....	10.50 @ 10.75
Tennessee Charcoal, No. 1.....
Tennessee Charcoal, No. 2.....
Alabama Car Wheel.....	17.50 @ 18.00
Jackson County Silvery.....	15.25 @ 16.00
Other Ohio Silvery.....	14.25 @ 14.50
Coke Bessemer.....	11.25 @ 11.50
Malleable Bessemer.....	10.50 @ 11.25

Bars.—Inquiries and sales are smaller than was reported last week. An inquiry for about 500 cars from the Pennsylvania Company is causing quite a flurry among the car building interests. Mill shipments of Common Iron from old Rail Mixture are maintained at

1.10¢ @ 1.12½¢, Chicago, and Guaranteed Iron 1.22½¢. Soft Steel Bars from strictly Billet stock are unchanged, at 1.30¢ @ 1.35¢, with only small sales. Jobbers continue to quote small lots from store at 1.25¢ upward for Iron, and 1.40¢ upward for Soft Steel.

Structural Material.—An improved demand is noted for bridge work. The very low price of Bridge Material promises to lead to considerable business from railroad companies, who need to make extensive improvements. A great deal of elevated railroad structure is getting into shape to be placed under contract, but the companies are slow to complete their arrangements. Building Shapes are only in demand in small lots. Quotations on millshipments, Chicago delivery, are as follows: Beams and Channels, 1.50¢; Tees, 1.65¢; Angles, 1.45¢; Universal Plates, 1.45¢. Small lots from stock sell at 1.90¢ @ 2.25¢ for Beams and Channels; 1.50¢ @ 1.60¢ for Angles, and 1.70¢ @ 1.80¢ for Tees.

Plates.—The heaviest orders for Plates taken in this market for some months was one for about 800 tons of Ship Plates, which was secured by a leading Pittsburgh concern. The price is stated to have been very low. Some inquiry is springing up for Boiler Plate, but the demand from general consumers continues light. Mill shipments, Chicago delivery, are quoted as follows: Tank Steel, 1.45¢ @ 1.55¢; Flange Steel, 1.65¢ @ 2.10¢; Fire Box, 1.65¢ @ 5¢. Store prices are as follows: Iron or Steel Sheets, Nos. 10 to 14, 1.80¢ @ 1.90¢; Tank Steel, 1.65¢ @ 1.85¢; Flange Steel, 2¢ @ 2.15¢; Boiler Tubes, in carloads, 70 % @ 75 % off.

Sheets.—Black and Galvanized Sheets are not very active at present. Mill shipments of No. 27 Common are held at about 2.40¢ @ 2.45¢, Chicago; No. 27 Soft Steel at 2.50¢ @ 2.55¢, and Galvanized sheets at 77½ % @ 80 % off; Sheet Copper, 14¢, with no discount. Small lots of No. 27 Common from stock are selling at 2.60¢ @ 2.70¢, and Galvanized Sheets at 75 and 5 %.

Merchant Steel.—A little improvement is noted in the general demand, while season contracts are still being placed. Mill shipments, Chicago delivery, are quoted as follows: Smooth Finished Machinery Steel, 1.60¢ @ 1.70¢; Smooth Finished Tire, 1.60¢ @ 1.70¢; Open Hearth Spring Steel, 1.85¢ @ 1.90¢; Bessemer Machinery, 1.50¢ @ 1.55¢; Bessemer Tire, 1.40¢ @ 1.45¢; Ordinary Tool Steel, 5½¢ @ 7¢; Specials, 10½¢ and upward.

Billets and Rods.—No business is doing in Billets, as the leading consumers in this vicinity are either well supplied or are not running their works. The market is disturbed by reports of low prices made by Eastern concerns, but in the absence of business quotations are nominally continued at \$18.25 @ \$18.50. Wire Rods have been sold only in small quantities, as the leading consumers are not yet ready to make contracts. Quotations are continued at \$25.25.

Rails and Track Supplies.—Small lots of Steel Rails have been sold during the week but no large contracts have been placed. Quotations are continued as follows: Standard Rails, \$25 @ \$27; Steel Splice Bars, 1.25¢ @ 1.35¢; Track Bolts, with Nuts, 2.10¢ @ 2.15¢; Spikes, 1.75¢ @ 1.80¢; Links and Pins, 1.65¢ @ 1.70¢.

Old Rails and Car Wheels.—Old Iron Rails are in sufficient abundance in points a little outside of this territory to cause some weakness on the part of holders who are anxious to sell. Sales have been made to interior mills at about \$10 delivered. Consumers are inclined to believe that this price will be shaded by some of the most anxious sellers. Old Steel Rails are quiet at \$7.75 @ \$10, according to length and selection. Old Car Wheels are unchanged at \$10 @ \$10.50.

Scrap.—The Scrap market is in very peculiar condition. Wrought Scrap is more abundant than any other grade, and yet the quantity held here is by no means so large as it was a year since. Cast Scrap is in fair supply, but not much in excess of the demand. The cheap classes of Scrap, such as Borings, Turnings, Chippings, Punchings, &c., are almost out of the market in consequence of the slackness among machine shops and other Iron working establishments. Dealers quote the following selling prices $\frac{1}{2}$ net ton: Railroad Forge, \$9; Dealers' Forge, \$8 @ \$8.50; No. 1 Mill, \$6.50; Pipes and Flues, \$6; Iron Axles, \$12.25 @ \$12.50; Steel Axles, \$12.75 @ \$13; Heavy Cast, \$7 @ \$7.50; Stove Plate, \$5 @ \$5.50; Fish Plates, \$9.50; Horseshoes, \$9; Mixed Steel, gross ton, \$5.50.

Metals.—Lake Copper is a trifle firmer and carload lots are quoted at 9 $\frac{3}{4}$ ¢. Casting Copper, on the other hand, is lower, and quoted at 8 $\frac{3}{4}$ ¢ @ 9¢, according to quantity. Spelter is steady at 3.25¢, with but limited business. Reports of an agreement on the tariff bill caused consumers of Pig Lead to hold off, and the market is a little easier at 3.35¢ asked.

Pittsburgh.

Office of *The Iron Age*, Hamilton Building, {
PITTSBURGH, August 7, 1894. }

The situation really shows some encouraging features. We have in mind three or four of the largest producers of Finished Iron and Steel in this district who are better employed and have more orders on their books than at any time during the past year. There is a continued demand for small lots at ruling prices, showing conclusively that buyers have no stocks and must come into the market at regular intervals, in spite of their belief that prices are too high. In Steel, for instance, sales for close delivery are being made right along and at quoted prices. The fact should be taken into consideration that every day that the Coke strike continues further postpones the time when Steel will show the expected decline. The Coke situation shows a little improvement this week and two more valley furnaces have gone in within the last few days.

Pig Iron.—The event of the week was a sale of 10,000 tons of low phosphorus Bessemer by a local interest for Pittsburgh delivery. The price is understood to have been very low. The demand for Bessemer continues to be confined to lots for August and September delivery, with prices ranging from \$11.75 @ \$12, Pittsburgh. Very little distinction is being made in prices for August delivery over those for August and September shipment. Forge Iron is somewhat scarce, and while the demand is not urgent prices are firm, on the basis of \$9.90 @ \$10, Pittsburgh, some furnaces asking as high as \$10.25, Pittsburgh. Foundry Iron shows no change

over last week. The demand is light, but there is not much offering and prices are being sustained. During the week Haselton Furnace of the Andrews Brothers Company, at Haselton, Ohio, and Etna of the Atlantic Iron & Steel Company, at Sharon, have resumed, the latter on Mill Iron. Out of 26 stacks in the Pittsburgh district only four are idle, these being one Isabella, one Edgar Thomson, one Monongahela and Soho. For August and September delivery we quote as follows:

Neutral Gray Forge.....	\$9.90 @ \$10.00 Cash.
All-Ore Mill.....	9.75 @ 10.00 "
No. 1 Foundry.....	11.75 @ 12.00 "
No. 2 Foundry.....	10.75 @ 11.00 "
Bessemer.....	11.75 @ 12.00 "

We note a sale of 500 tons for August and September delivery at \$11.80, Pittsburgh, also a sale of 1000 tons for August delivery at \$12, Pittsburgh, and one of 200 tons for spot delivery at \$12.25, Pittsburgh.

Ferromanganese.—We note a sale of 50 tons of 80 % Domestic, at \$53 at buyer's mill, equal deliveries in August and September.

Billets.—There is a continued demand for small lots of Steel for close delivery, and we are advised of sales made during the past few days covering about 5000 tons, at prices ranging from \$17.25 to \$17.50, Pittsburgh, for August delivery. The Pittsburgh mills are pretty well sold up and some of them have no Steel to spare this month and are declining to quote. Nothing is doing for extended deliveries, buyers holding off in the belief that when the Coke strike is settled they will be able to do better.

Structural Material.—A contract for about 350 tons of Beams for a power building was taken last week by a local mill at 1.30¢, Pittsburgh. No large work is in sight, but there is a brisk demand for small lots. Prices are firm and we quote as follows: Beams and Channels in round lots, 1.30¢ at mill; in small lots, 1.35¢ @ 1.40¢, according to order. We quote Angles and Universal Plates at 1.25¢ @ 1.35¢, and Tees, 1.40¢ @ 1.50¢.

Plates.—The demand is only moderate, but in connection with orders booked some time ago serves to keep the mills pretty well employed. We quote as follows: Tank Steel, 1.20¢ in round lots and 1.25¢ @ 1.30¢ for ordinary business; Shell is ruling at 1.35¢ @ 1.40¢ and Flange at 1.45¢ @ 1.50¢; Ordinary Fire Box, 2 $\frac{1}{4}$ ¢ @ 3¢; Railroad Fire Box, 3.35¢ @ 3.50¢.

Bars.—Some season contracts for Iron and Steel Bars for implement makers have been closed during the week and some low prices have been made. The Valley mills are moderately well employed, some of them to nearly full capacity, and as far as operations are concerned, the outlook is considerably improved. We quote Common Iron Bars at 1.05¢ at mill, but for desirable orders this price is sometimes shaded. We quote Steel Bars at 1.05¢ @ 1.10¢, with Bar Iron extras.

Muck Bars.—We are not advised of any sales and continue to quote at \$19 @ \$19.25, delivered at buyer's mill, for best grades.

Merchant Steel.—There are no new features in the market. Some season contracts remain to be placed and are still under negotiation. We quote as follows: Bessemer Machinery, 1.80¢ @ 1.35¢; Open Hearth Spring, 1.65¢ @ 1.70¢; Open Hearth Machinery, 1.45¢ @ 1.55¢; Machine Straightened Tire, 1.60¢ @ 1.65¢; Cold Rolled Shafting,

2.30¢ @ 2.35¢; Tool Steel, 5¢ @ 7¢ for ordinary grades; 11¢ @ 13¢ for extra grades.

Wire Nails.—The demand shows considerable improvement, and in connection with the very light stocks on hand serves to keep prices well sustained. We quote Wire Nails at \$1.10 base, in carload lots, while some mills are holding to \$1.15 at mill. The demand for Cut Nails also shows some improvement, and we quote at 90¢ @ 95¢, in carload lots at mill, for usual averages.

Barb Wire.—There is a little better demand and a number of orders for fall delivery have already been placed. We quote Four-Point Galvanized at \$2.10, in carload lots at mill, and Plain Wire at \$1.30 in same quantities. The quotation on Plain Wire in our issue of last week which appeared as \$1.50 should have read \$1.30.

Wire Rods.—Since our report of last week some additional business has been closed, one order for 2800 tons having been placed. A number of small orders ranging from 200 to 500 tons have been booked at prices equal to \$24, Pittsburgh. The output of Rods for July by the Pittsburgh Wire Company exceeded 5000 tons.

Sheets.—The demand is light, the large buyers having covered their requirements, while the small trade are buying only as their necessities demand. However, most of the mills will be busy for the next two or three months on old orders. We quote No. 24 Common Iron Sheets at 2.25¢ @ 2.30¢ No. 27 Steel at 2.35¢ @ 2.40¢; Galvanized Iron is ruling at 75 and 10 % off and for round lots 80 % off.

Skelp Iron and Steel.—There is a fair demand, an order for 1000 tons of Steel Skelp having been placed here last week. We quote as follows: Grooved Steel Skelp, 1.05¢ @ 1.10¢; Sheared Steel Skelp, 1.15¢ @ 1.20¢; Grooved Iron Skelp, 1.15¢ @ 1.25¢; Sheared Iron Skelp, 1.30¢ @ 1.35¢, cash, 30 days.

Pipes and Tubes.—The demand continues fair, but prices are hardly as firm as they were, especially for future delivery. This is doubtless due to the fact that several mills recently idle are now in full operation and are actively canvassing the trade for orders.

Connellsville Coke.—Reports from the Connellsville region indicate that the situation is slightly improved, the desertions on Saturday last being fewer than expected. There is great eagerness among Valley furnacemen to obtain Coke at once, and for August shipment as high as \$1.50 $\frac{1}{2}$ ton is being offered. There continues to be much dissatisfaction among the Valley furnacemen over what they term their unfair treatment by some of the Coke operators. They say there is lots of Coke going West of Pittsburgh, but they are not getting it. One Valley furnace interest was fortunate enough to find an operator who had some surplus Coke and succeeded in placing his order for his entire requirements and the Coke is now going forward. It is stated that as high as \$1.25 $\frac{1}{2}$ ton is being offered for Coke for balance of the year, providing shipments are commenced at once.

We are officially advised that The Johnson Company, Johnstown, Pa., are not identified with the project of establishing a plant at Lorain, Ohio, for the manufacture of tin and terne plate.

The Vulcan Iron Company, Limited, New Castle, Pa., manufacturers of rolling mill machinery, recently erected an addition to their pattern house consisting of an ironclad building, 40 x 80 feet, and also an addition to their boiler house, 30 x 40 feet, containing two stories and provided with a dry house overhead for the purpose of drying lumber.

Birmingham.

BIRMINGHAM, August 8, 1894.

The general situation this week indicates changes for the better. Bank clearings here showed an increase of \$130,000 over the corresponding week last year. Accommodations on good collateral are readily accorded to reliable customers. Our banks have stood by their customers manfully and are deserving of credit. A revival of building is noticeable, in contrast to almost absolute stagnation in the last six months. The ruins left by the Caldwell Hotel fire are being cleared with a view to rebuilding the two burned blocks. The strike situation is unchanged as far as the miners are concerned. State elections to-day will have a strong tendency to settle industrial and financial affairs here. The railroad strikers are still mostly out of work, as negroes have been largely employed by the roads in their places. Crop prospects are excellent—better than for some years—copious rains, with warm sunny days intervening, have pushed crops beyond expectation. The cotton and corn crops are liable to be the largest for some time back and of good quality. This will materially aid the Southern industrial and commercial situation.

Pig Iron.—A visit to all the furnaces reveals still decreasing stocks of iron. One large concern has less than 1500 tons on hand and orders for some 14,000 tons. Similar conditions exist with most of the other companies. Hardly any are in the market for new orders on immediate or early delivery, nor are any new sales recorded for shipments beyond three months. Shipments are almost entirely on old orders at old prices. There has been absolutely no accumulation of stocks at any plant. The demand for Soft Irons is still in excess of supply and is especially good in the Northwest and Chicago territory. There has been no loss of business in that territory to Southern producers, as they are practically out of the market, with no inclination to take new orders except under higher quotations. When this change occurs and they are caught up on their old orders and getting back to normal production the Chicago markets will again have all the Southern Iron they need, as Southern Soft Irons have obtained too strong a hold there not to find ready takers at similar figures. It is not a safe calculation to say that prices have become too low for them to be able to compete in that territory. No. 1 Foundry is in rather light demand, also Gray Forge. Some new orders have been accepted at following prices, as seen personally on the order books: No. 1, \$8.50, \$8.90, \$9; No. 2 Foundry and No. 1 Soft, \$7.60 @ \$7.95; No. 2 Soft, \$7.75 @ \$7.85. General quotations range as follows: No. 1 Foundry, \$8.50 @ \$9; No. 2 Foundry, \$7.50 @ \$8; No. 3 Foundry, \$7.25 @ \$7.50; No. 1 Soft, \$7.50 @ \$8; No. 2 Soft, \$7.50 @ \$7.75; Gray Forge, \$6.75 @ \$7; Mottled, \$6.50 @ \$6.75; White, \$6.50. The feeling is one of greater encourage-

ment, especially as the idea is gaining ground that the low prices of Northern raw materials are not going to last. A Pittsburgh statement that Coke costing \$3 cannot well be kept selling at \$1 1/2 ton is a straw that shows which way the wind is blowing. This, in connection with the general inclination to get back to work, evidenced all over the country since the collapse of the great strikes, is giving some courage to all manufacturers. No. 2 at Bessemer has blown in a short time ago. No. 1 is being repaired and relieved, both using Scioto brick for furnace and Bessemer brick for stoves; No. 2, of Sloss Iron & Steel Company, will blow in this week.

Rails.—G. C. Bull & Co. report considerable movement in Railroad Material. Sales of 1000 and 1300 tons new Rails were consummated and negotiations are under way for a large lot of relay Rails. A fair order for Beams has been placed by them as a result of the building movement here and more is to follow.

Finished Materials.—Both rolling mills are idle with uncertainty as to resuming. All wage questions are satisfactorily adjusted and raw material stocks are being accumulated. Finished products are shipped mainly on old orders, new orders are fair, though the market shows as yet little encouragement. Quotations are the same as Pittsburgh. The Birmingham Rolling Mill Company are at present putting in new machinery—three-high plate mill new shears to cut 4-inch Billets, new lathes, gas producers, gas furnaces and additional buildings to the extent of almost \$30,000. They expect to put in two new Sheet mills and further improvements to the extent of some \$30,000 more. The directors and officers of the company are Messrs. J. H. Coughlan of Birmingham, president; C. G. Davidson of Tuscaloosa, secretary and treasurer; W. M. Pentecost of Tuscaloosa, and Z. L. Nabers of Birmingham. These four own all the stock.

(By Telegraph.)

The coal operators are in session with the miners' committee. They propose 37 1/2 ¢ per ton for mining, while No. 1 Foundry is \$8.50 or less, and increase 2 1/2 ¢ on Coal for every 50 ¢ advance in Iron up to \$11, then 2 1/2 ¢ increase for every \$1 increase in Iron. Committee seem favorable. It is probable that miners will accept and declare strike off to-day.

Sloss Iron & Steel Company are completing a Roberts Coal Washer, at their city plant, of a capacity of 500 tons washed Coal daily. Rolls for crushing lump in run of mine Coal are provided for making them independent of short slack Coal supply. They have three Robertson Washer plants at the mines, and will be the only plant in the district to run entirely in washed Coke. Results at North Birmingham already show an increased production, with decreased consumption of Coke.

Outputs are increasing, the negro miners are becoming more expert, and at the present rate the full output needed will soon be obtained. Quality is improving somewhat, demand is slackening, the New Orleans market being pretty well glutted. The unfavorable reports from Connellsville may strengthen the Coal strike here, though the companies are in a fair way to be-

come independent of the striking miners. With the use of washers, quality mined is not as essential as formerly. Blocton is still idle. These mines, formerly owned and managed by Colonels Aldrich and Cadle, used to be among the largest and steadiest producers here when under their management.

Metal Market.

Pig Tin.—Prices have varied to a very slight extent during the past week. Under the influence of careful nursing they were carried up a trifle above the extreme lowest point of the month. The method of making quotations had, however, no perceptible influence upon buyers. Consumers have purchased in a most perfunctory manner. Dealers have bought only as supplies needed replenishing. Speculative dealings were very thin. A large supply remains in sight. In fact, there is so much of it that the leading operators experience more than ordinary difficulty in regulating prices. At this writing 18.70 ¢ @ 18.75 ¢ net cash would seem to fairly reflect market value for 5 tons or larger lots for current month delivery. Smaller quantities are dealt out at corresponding rates, and sellers seem more anxious than buyers. In short it is a weak market on its merits.

Copper.—Competition for business has been livelier. Some sellers of Lake Superior Ingot quietly closed orders that for some time have been under consideration at 9 ¢ for September and later delivery. Others subsequently solicited business at the same price, and somewhat conspicuous offers were made publicly at 9.10 ¢. Hardly as general effort was made to market other varieties, but there was enough to slightly weaken prices. At the moment 8 1/2 ¢ for electrolytic and 8 1/2 ¢ for common casting stock would appear to be extremely high. Dealings have been increased to a moderate extent only, if at all, by the turn in values.

The exports of Copper from the United States during the month of June, as recorded in the report of the Bureau of Statistics, were as follows:

Ore—	1894. Tons.	1893. Tons.
To United Kingdom....	127	5,951
Totals.....	127	5,951
Ingots, bars, &c.—	1894. Lbs.	1893. Lbs.
To United Kingdom....	6,828,486	1,127,175
To Germany.....	1,597,684	884,841
To France.....	914,239	1,828,475
To other Europe.....	3,668,673	3,733,642
To elsewhere.....	40,000	171,332
Totals.....	13,049,682	7,745,465

The movement during the 12 months ending June 30 is given as follows:

Ore—	1894. Tons.	1893. Tons.
To United Kingdom....	22,464	41,163
To Germany.....	1,016	106
Totals.....	23,480	41,269
Ingots, bars, &c.—	1894. Lbs.	1893. Lbs.
To United Kingdom....	74,611,789	5,569,214
To Germany.....	24,998,854	5,074,337
To France.....	28,642,773	12,536,800
To other Europe.....	60,095,810	14,026,344
To elsewhere.....	698,383	435,709
Totals.....	195,047,642	37,642,464

Pig Lead.—Prices have gone a fraction lower under the influence of freer offerings for shipment and delivery this month and next. Single carloads went at 3.55 ¢ @ 3.60 ¢ on spot, and August delivery at 3.55 ¢, while the latter price was accepted for about 200 tons for August shipment. There is active speculative interest in the market, and

the elasticity that has characterized values was due chiefly to caution about taking broad risks on tariff revision.

Spelter.—Only routine business of most pronounced conservative type has been effected in this market. The offering has not been particularly heavy, but in the present dull condition of the market sufficient to keep values rather weak. Ordinary Western brands do not bring over 3.45¢ in carload lots, and it seemed probable that bids of 3.40¢ for larger quantities would be accepted. Fancy brands command about the usual premium.

Antimony.—The business passing is merely routine and the demand is about the same. Prices are easy at 8½¢ @ 8¾¢ for Hallett's and 10¢ for Cookson's.

Nickel.—Prices are barely steady on the basis of 40¢ for fair sized lots.

Tin Plate.—Business has been uneven and, upon the whole, rather below the average for this season of the year. Inquiries are spiritless, with little interest shown in venturing beyond well-defined wants. The Government returns show that 454,000,000 lb were imported during the 12 months ending June 30, against 628,500,000 lb the previous year. In the face of this decrease the stocks in bonded warehouses increased from 32,187,000 lb to 48,968,000 lb. This speaks for itself. Spot prices are as follows: Charcoal, Melyn grade, IC, \$6; do., Melyn grade, Crosses, \$7.75; do., Allaway grade, IC, \$5.40; do., Allaway grade, Crosses, \$6.45; do., Grange grade, IC, \$5.50; do., Grange grade, Crosses, \$6.60; do., Terme, M.F., 14 x 20, \$7.25; do., M.F., 20 x 28, \$14.50; do., Worcester, 14 x 20, \$5.70; do., 20 x 28, \$11; Alyn grade, 14 x 20, \$5.15; do., 20 x 28, \$10 @ \$10.25; D. R. D. grade, 14 x 20, \$4.90; do., 20 x 28, \$9.70. IC Coke: Penlan grade, \$5; do., J. B. grade, 14 x 20, full weight, \$5.15; do., 100 lb, \$4.75; do., 95 lb, \$4.62½; do., 90 lb, \$4.55. IC Bessemer Steel, Coke finish: 14 x 20, full weight, \$5.12½; do., 100 lb, \$4.70 @ \$4.75; do., 95 lb, \$4.60; do., 90 lb, \$4.50. IC Bessemer Steel, Coke finish, sq., \$5.30. IC Siemens Steel, Coke finish, sq., \$5.45. Wasters: S. T. P. grade, 14 x 20, \$4.60; do., S. T. P. grade, 20 x 28, \$9; do., Albearne grade, 14 x 20, \$4.90.

New York.

Office of The Iron Age, 96-102 Reade street, }
New York, August 8, 1894. }

Pig Iron.—The demand continues very light and the trade is dull. There is an inquiry in the market for about 1000 tons of Warrant Iron. We quote standard brands \$12.50 @ \$13 for No. 1; \$11 @ \$12 for No. 2, at tidewater. Southern Iron, same delivery, \$11.50 @ \$12.25 for No. 1; \$10.50 @ \$11 for No. 2; \$10 @ \$10.25 for No. 3; \$10.25 @ \$10.75 for No. 2 Soft, and \$10.50 @ \$11 for No. 1 Soft. Foundry No. 4 (Foundry Forge) is \$9.75 @ \$10.25.

Spiegeleisen and Ferromanganese.—No transactions of any consequence are reported in foreign. We quote foreign Ferromanganese nominally \$52 @ \$53 for 80 %, at tidewater.

Billets and Rods.—One of the large steel works in Eastern Pennsylvania is pushing for business, but is not naming prices low enough to meet buyers' views. We continue to quote \$19.25 @ \$19.50, at tidewater, for Billets, and \$26.75 @ \$27.25 for Wire Rods.

Steel Rails.—Nothing is doing in Standard Sectional, and the demand for Light Sections is small. The mills rolling Girder Rails are still behind their orders and are quoting nominally \$24 at mill. Another month will probably put them into shape. An inquiry is in the market for 5 miles of track for a Brooklyn street road.

Track Material.—We quote as follows for small lots: Spikes, 1.50¢ @ 1.70¢; Fish Plates, 1.20¢ @ 1.40¢; Track Bolts, Square Nuts, 2¢ @ 2.10¢, and Hexagon Nuts, 2.10¢ @ 2.30¢, delivered.

Manufactured Iron and Steel.—It is probable that this week the contract for the Presbyterian Home and for a wool warehouse in this city will be closed. A large building in Buffalo is in the market, involving about 1200 to 1500 tons of material. Plates are weak and Bars are practically dead. We quote: Beams up to 15-inch, 1.40¢ @ 1.50¢ for round lots; Angles, 1.30¢ @ 1.35¢; Universal Mill Plates, 1.25¢ @ 1.35¢; Tees, 1.50¢ @ 1.60¢; Channels, 1.40¢ @ 1.50¢, on dock. Steel Plates are 1.25¢ @ 1.40¢ for Tank; 1.40¢ @ 1.50¢ for Shell; 1.60¢ @ 1.65¢ for Flange, and 1.75¢ @ 2¢ for Fire Box, and 2¢ @ 2.25¢ for Locomotive Fire Box, on dock; Refined Bars are 1.20¢ @ 1.9¢, on dock, and Common 1.10¢ @ 1.20¢; Soft Steel Bars are 1.20¢ @ 1.30¢; Scrap Axles are quotable at 1.35¢ @ 1.50¢, delivered; Steel Axles, 1.35¢ @ 1.50¢, and Links and Pins, 1.40¢ @ 1.60¢; Steel Hoops, 1.40¢ @ 1.50¢, delivered; Cotton Ties, 70¢ @ 75¢; 45 lb bundle, tidewater; Machinery Steel, 1.20¢ @ 1.40¢; Toe Calk, 1.75¢ @ 1.90¢, and Sleigh Shoe, 1.60¢ @ 1.75¢, delivered.

Stock Warrants.—The American Pig Iron Storage Warrant Company report as follows under date of August 1:

	Tons.
Stock in yard June 30, 1894.....	100,700
Put in yard for 31 days, ending July 31, 1894.....	3,500
Total.....	104,200
Withdrawn 31 days, ending July 31, 1894.....	1,400
Net stock in yard July 31, 1894.....	102,800

Financial.

During the greater part of the week under review there were few developments in financial circles. So many contradictory reports are received from Washington concerning the dickering in the Conference Committee, and they seem so thoroughly tainted with the wishes and hopes of those from whom they emanate, that the average business man has fallen into a condition of resigned expectancy. There is an undercurrent of exasperation at the callous manner in which the business interests of this great country are being ignored, and a feeling of mortification and disgust at the sordid personal considerations which seem alone to sway some of our legislators. The latest advices seem to point to an early settlement.

The most interesting feature of the week was the sudden revival of grain speculation, the reports of widespread damage to the corn crop having sent that article soaring. Prices have advanced 20¢ in Chicago in two weeks,

or over 11¢ from Saturday to Wednesday noon. The extraordinary result has been reached that corn sold at higher prices than wheat. The latter was also carried upward by overflow speculation, and even the Granger stocks sympathized with the advance.

A weakening in sterling exchange has put an end to the chances of gold exports this week. Even one lot of \$500,000, withdrawn for export, has been withheld. It is explained that a good deal of the gold which has been shipped represents foreign capital for which no remunerative employment can be found on this side of the water and that it will quickly flow back as soon as better interest can be secured here than can be obtained abroad.

Time money is quiet. There is no diminution in the supply, but rates are a little closer, especially for the longer periods. The demand is moderate. Rates 1 % for 30 days, 1½ % for 60 days, 2 % @ 2½ % for 90 days to 4 months, 3 % for 5 months, 3½ % @ 3¾ % for longer periods. Mercantile paper continues in excellent demand for high-grade material. Some attractive names may be seen in the market, but the aggregate of such material constitutes a supply of only moderate dimensions. Rates 3 % for prime indorsements, 3½ % @ 3¾ % for high-grade single names, 4 % @ 5 % for others. Call money in London ¼ % @ ½ %; short bills ½ %; three-months' bills ¾ %.

The market for sterling opened on Wednesday easy and the posted rates were unchanged at \$4.88 @ \$4.89½. The afternoon market continued soft, tending to lower rates, but with very little business. Rates for actual business were as follows: Sixty days \$4.87 @ \$4.87½, demand \$4.88 @ \$4.88½, cables \$4.88½ @ \$4.88½. Commercial bills were \$4.86½. The supply of grain bills was small.

New York exchange was quoted today as follows at the places named: Charleston, buying par, selling ¼ premium; Chicago, par to 15 discount; Savannah, buying par, selling ¼ premium; New Orleans, commercial par, bank 75 premium; Boston, 5¢ @ 6¢ premium; San Francisco sight 12½, telegraph 15; St. Louis, 20¢ premium.

The Canadian hardware trade find no inducement to handle binder twine, nowadays. It was formerly a good summer line. Now the duty is reduced one-half of what it was then, so that on that account the price had to be lowered and the retailers' margin cut. Next a provincial and afterward a Dominion prison began the manufacture of twine, and a co-operative farmers' company was started. The result was that nothing was left for anybody and less than nothing for the trader.

The corner stone of the Texas Cotton Palace, which is to be opened in Waco, Texas, in November, was laid the last week in June with appropriate ceremonies. The extreme length of the structure is 306 feet, the width 220 feet and the extreme height 130 feet. The palace is located in what was formerly known as Padgett's Park, which comprises about five blocks, and is said to be one of the loveliest spots around Waco. It is shaded by mammoth pecans, walnut, elm and other varieties of trees. In the rear of the palace is a large auditorium, having a seating capacity of 6000. The prime object of the Cotton Palace, we understand, is the development of the South, and an invitation has been extended to all sections to co-operate.

British Metal Market.

[Special Cable Dispatch to The Iron Age.]

LONDON, WEDNESDAY, August 8, 1894.

In Pig Tin there has been a larger business at irregular prices. Straits sold down to £65. 5/ for prompts, and recovered to £65. 15/. Futures moved at about the same rate and were the most heavily dealt in. The early decline was due to heavy shipments from the Straits and increase in stocks that caused free selling against which the "bulls" made hardly any resistance. The recovery subsequently was due chiefly to appearance of more outside speculative interest. To day the market has been stronger, with dealings at £66. 5/ for prompts and £66. 12/6 for three months' futures.

Copper prices have improved somewhat, £38. 13/9 having been realized for Merchant Bar prompts. This was due partly to the fact that the statistics for last month were better than expected and rumors that leading producers are again trying to arrange for control of output and that importers have been buying. Consumers have purchased more freely because of the livelier interest shown by speculators. Offerings of Furnace Material have been moderate and sales small. The market to-day is steady. Merchant Bars quoted at £38. 12/6 for prompts and £39 for three months' futures. Best selected English £41.

Tin Plate market has been inactive. Orders difficult to obtain except at late lowest prices. There are now about 307,000 boxes in store at Swansea. The Glynbendy and the Avondale works have been closed owing to depression in trade and others are reducing cost of production. Workmen in some instances are making concessions. Prices f.o.b. at Swansea are as follows:

Bessemer Cokes, 14 x 20..... @ 10/
 Siemens Cokes, 14 x 20..... @ 10/3
 Ternes, double box..... @ 19/
 Charcoals..... 11/ @ 13/

Exports last month were 26,000 tons; last year, 33,000 tons.

Pig Lead has not varied much from £9. 10/ @ £9. 12/6 for Soft Spanish, and the market is at present very quiet.

Spelter is rather weak at £15. 10/ @ £15. 12/6 and meeting with rather slow sales.

In Pig Iron warrants there has been hardly any variation and no outside speculation. Prices to-day were about 42/ @ 42/1 for Scotch, 35/4½ @ 35/6 for Cleveland and 44/ for Hematite. Exports of Pig Iron the past month, 86,000 tons against 79,000 tons last year.

It is interesting to note that a large Gothic palace is being constructed in Venice, for the reason that no palace of any kind has been built in that city for the last 150 years and no Gothic palace for over 400 years. The work of destruction, however, has been in progress, and since the time of Napoleon it is estimated that 200 or 300

palaces have been demolished. A change seems, however, to have come over the "Queen of the Adriatic," and of late years its property has been advancing in value, and much improvement has taken place in the restoration of old and decaying palaces by private hands and ancient buildings by the Government, and now it is said that not only has a period of restoration set in, but one of construction has commenced. The Gothic palace referred to is pure in style and is located on the Grand Canal, opposite the Grand Hotel. It has a frontage of 118 feet and covers about 1000 square yards, and will cost about \$80,000.

Lighting Passenger Cars.

By far the most complete and satisfactory statement of the cost, operating expense and workings of car lighting under the modern demands is made in a paper by M. B. Leonard, read before the convention of railway telegraph superintendents at Detroit in June. Electricity must compete as to light with the Pintsch system of gas and as to cheapness with oil. Mr. Leonard allows full credit to the Pintsch gas lamps for the good light which they give to the public at the comparatively moderate cost of \$400 per car, and the average expense of 95 cents per car each day.

Nevertheless, it is to electricity we should look for the light of the future, even though the experiments just mentioned have not yielded all the hoped for results. The greater part of Mr. Leonard's paper is taken up with a detailed account of a new system of lighting devised by Lieutenant Lewis, United States Army, which uses the axle of the car while in motion to run a dynamo fixed on the truck itself.

The Lewis system, under careful trials covering several months of actual working, has shown a degree of success which speaks well for the future lighting of all kinds of cars. The Lewis invention costs \$500 per car, which covers all the expense, including a storage battery which shall supply the car for 12 hours standing still. The yearly expenses per car is as follows:

Interest on \$500—original cost.....	\$30.00
Depreciation on plant.....	74.37
Lamp renewals.....	40.00
Attendance, pulleys, &c.....	16.60
Renewals of brushes, acid, &c.....	14.20
Total per car per year.....	\$175.17
Total per car per month.....	14.60
Total per car per day.....	48
Total per car per hour.....	05
Total per car per lamp-hour.....	36

The real cheapness of this form of electric lighting will be seen when its daily expense per car, which is 48 cents, is compared with oil at 64 cents, Pintsch gas at 94 cents, the Chicago, Milwaukee and St. Paul system at 98 cents, and the Pullman system at \$1.70.

The Plumber and Decorator of London remarks that in the ventilation of churches and school houses and public buildings generally, a very common mistake is made. Those in charge frequently fail to open all the windows immediately after the buildings have been vacated. The exhalations from the lungs and the emanations from the body, being light, will float for a while in the atmosphere before falling to the floor, and if the windows be opened at once, so that a current of air can cross the hall, many of them will be carried out. If, however, as is usually the case, the windows are not opened for some hours, may be not till the next day, these particles, settling upon the

floor, are not carried away, but when the hall is again occupied are by the feet thrown up into the atmosphere and inhaled by the lungs, from which they had been exhaled the day before.

How Workers Live.

An English health journal expresses great surprise at the quantity of food eaten by American as against English laborers. It is very curious to see how different foods preponderate in the different industries. The textile worker in Europe will have 95 pounds of meat per annum for every 100 units of consumption, or say a quarter of a pound of meat a day, while steel workers indulge in 114 pounds for every 100 units. On the other hand, the weaver consumes more flour than the steel worker—275 pounds per 100 units instead of 208 pounds. He also takes about 71 pounds of sugar more per 100 units, and a dozen more eggs; of butter, lard and tea both take about the same, though both in tea and coffee the weaver a little exceeds the other. That is, in the calling which demands the greater muscular exertion, a greater amount of nitrogenous food is required. On the European Continent the consumption of meat by workers is much less than in Britain. Even in the iron industry the German, with 16½ pounds per 100 units, is little more extravagant than the English weaver; while the Frenchman consumes only 57½ pounds and the Belgian 55½ pounds. On the other hand, the latter consumes more flour and eggs, more than twice as much of each. Their consumption of coffee, too, is large—14 pounds and 19 pounds respectively to the Englishman's 3½ pounds; but it must also be taken in the reckoning that tea does not appear in their accounts. But all these figures pale before the statistics of food consumption in America. The Illinois iron worker manages to consume 393 pounds of meat per 100 units, and though this is excessive, 206½ pounds are put down as the average of Pennsylvania, 197½ pounds for Ohio, 187½ pounds for West Virginia and 155 pounds for Tennessee. The average consumption of flour for the States is about 250 pounds, but voracious Illinois again comes to the fore with 366 pounds; and sugar, butter and eggs are everywhere more lavishly used than in Europe. Here, as in Europe, iron and steel industries are found to be more self-indulgent than other trades, but the expenditure here is far above that of even the most extravagant worker in Europe. Much of the food accounted for in these figures is actually consumed, but a large margin must be allowed for what is wantonly destroyed, and when the history of the waste of food products in the United States comes to be written it will contain some startling and not altogether pleasant reading.

Welding Iron and Nickel.

In welding iron and nickel Mr. Fleitman has discovered, says an exchange, that the adhesion of the two metals was such that it became impossible to separate them by mechanical action, and a chemical examination demonstrated a true alloyage—an intimate composition, although the welding had been done at a temperature lower by 500° or 600° than the point of fusion. Other experiments established the volatility of iron at a cherry red temperature. Two superposed plates of iron and nickel having been submitted to the same heat, the iron passed over the nickel in notable quantity without there resulting either welding or adhesion of the surfaces. The nickel does not reciprocate.

HARDWARE.

Condition of Trade.

THE only notable change in the condition of the Hardware market is the placing of a number of large orders by some of the Western jobbers, who are putting themselves in a position to be ready for an increased business. Orders are, however, in general light, it being no unusual thing for the largest houses to telegraph small orders for express shipment. Everything points to the fact that stocks are everywhere very low, and that when any active demand sets in there is likely to be a scarcity of goods. The crop reports are generally favorable and collections are on the whole satisfactory.

Chicago

The volume of business in Shelf Hardware is steadily growing. Country merchants continue their policy of ordering only to cover their actual wants, but their wants are evidently increasing, as orders are larger. The crop question is the absorbing topic in trade circles but the damage by drought is believed to have been exaggerated. There are large sections of the Northwest in which good crops are almost assured, and farmers in these sections will be greatly benefited if the advanced price holds on corn and other late farm products. Jobbers are inclined to take a very hopeful view of the situation on the whole and look forward to a larger fall trade than that of last year. They are advising manufacturers of Hardware not to weaken in prices in order to encourage business, but to exercise a little patience until the demand improves, when the question of price will be subordinated to the more important matter of getting goods that will be needed. Stocks are so light and production has been so greatly curtailed that if the demand for staple articles assumes even fair proportions a decided scarcity will be felt. Heavy Hardware is less active than it has been, and August promises to be a dull month in this line.

St. Louis.

There is some improvement to note in the general situation. For a month past the trade have been talking nothing but crops, which have all along promised to be large. As a rule they will prove so except in a few sections. Farmers will soon be in the market for supplies and a fair trade will be the result. There is as yet little or no demand for fall and winter goods, and while jobbers have good stocks on

hand they are unable to interest the retailer. With good crops assured, however, the situation is more encouraging and the outlook is decidedly better. There are no changes to note in prices, which are, generally speaking, being fairly well maintained.

Notes on Prices.

Wire Nails.—There is a notable increase in orders for Wire Nails, and with the very small production at present going on stocks are light and steadily decreasing, but prices are no better. Quotations are on the basis of \$1.10 at mill for carload lots, and this figure would be shaded by some manufacturers. The New York price for small lots from store is \$1.30 to \$1.35.

Chicago.—Manufacturers are doing almost nothing in this market. Inquiries have fallen off. The consumption of Wire Nails is light at present, and merchants are in no hurry to buy, taking chances of manufacturers weakening if the dullness continues for any length of time. Meanwhile the leading Wire Nail companies profess indifference and say that if small concerns feel impelled to make lower prices they will not follow them, but will wait for the advent of fall trade, when they feel sure that they can sustain themselves. Factory lots are therefore quoted as before at \$1.17½ to \$1.20, Chicago, while small lots from store are selling at \$1.20.

Cut Nails.—There is more doing in Cut Nails, but no change in prices. We quote as representing the Eastern market 95 cents to \$1 for carload lots on dock. The store price for Cut Nails in New York is \$1.10 to \$1.15.

Chicago.—Manufacturers report a moderate trade and continue quotations at 95 cents for 60-cent average, on factory shipments, Chicago delivery. Jobbers quote small lots \$1.10.

Barb Wire.—There is no change in the position of this article. It is not the season to look for any active demand, and such orders as come along are filled at unchanged prices. The following are the quotations for Four-Point Galvanized, delivered at the points named: Pittsburgh, \$2.05 to \$2.10; Cleveland, \$2.10 to \$2.15; Cincinnati or Allentown, \$2.25 to \$2.30; Chicago or New York, \$2.25 to \$2.30.

Chicago.—The limited volume of business now in progress is taken by manufacturers at unchanged prices. They state that conditions are such that they do not apprehend a break in rates. Factories have not yet started

up to any extent, and will be kept closed until the demand is greater. Jobbers are doing very little in this line and continue to quote small lots of Galvanized at \$2.35 to \$2.40, with 10 cents off for carloads. Large contracts for Plain Wire have been placed the past week by Agricultural Implement manufacturers, who have been able to purchase their season's supply at much lower prices than last year.

Cordage.—The amount of business doing in Cordage is light and most of it is in the hands of the dealers who are able to undersell makers' present prices. Prices are weak, ruling about as follows:

	Cents.
Manila, base.....	7½
Sisal, ".....	5½
New Zealand, base.....	4¾

Indurated Fiber Ware.—Cordley & Hayes, sole agents, 172 Duane street, New York, announce the following reductions in the prices of some of their lines of Indurated Fiber Ware, taking effect August 1, the prices given being subject to a discount of 25 per cent. to the trade:

	Per doz.
Pail Covers.....	\$1.60
Wash Basins.....	1.60
Slop Pails.....	7.00
Slop Jars.....	8.80
Slop Jar Mats.....	3.00
I. W. Buckets, nicked faucet, 3 gal.....	12.00
" " " " 4 ".....	15.00
" " " " 5 ".....	18.00
" " " " wooden " 3 ".....	9.00
" " " " " 4 ".....	10.20
" " " " " 5 ".....	15.00
Spittoon Tops, No. 0.....	2.40
" " " " 1.....	2.00
" " " " 2.....	1.80
" " " " 3.....	1.60

This reduction in Spittoon Tops will make the Spittoons considerably less in price. No. 3 Spittoon will hereafter be only 9 inches in diameter and will list at \$4.20 per dozen. No. 2 will be 11 inches in diameter and will list at \$4.80. No. 1 of the present size would list at \$5.40, but it is proposed to change the size and make the Spittoon about 13 inches in diameter. The price on this size has not yet been determined. The No. 0 size will measure 15 inches in diameter instead of 16 inches as heretofore, and will list at \$7.80. A new catalogue of the Ware has just been issued.

Bench Stop.—Tatum's Bench Stop, manufactured by the Samuel C. Tatum Company, Cincinnati, Ohio, and illustrated in *The Iron Age*, July 19, 1894, is sold at \$9 per dozen, subject to a discount of 40 and 10 per cent.

Wringers.—The Lovell Mfg. Company of Erie, Pa., have put on the market a new line of Wringers, which they style the Guarantee. They inform us that these goods are made to supply

a line of trade who want the best that is to be had regardless of cost. They emphasize the quality of the rolls and say that the prices in these Wringers have been fixed at as low a figure as is consistent with a reasonable profit, and that whatever competition may be brought out, they will make no concessions in price nor deteriorate the quality. The following are their list prices for this line, the discounts being the same as on their other Wringers :

No.	Size of Rolls.	Price per doz.	No.	Size of Rolls.	Price per doz.
2 1/2	10x1 1/4	\$45 00	28 W	14x2	\$144 00
1 1/2	11x1 1/4	55 00			
1 1/4	11x1 1/4	65 00	18 P	11x1 1/4	78 00
1 3/4	12x1 1/4	65 00	26 P	12x2	115 00
			28 P	14x2	152 00
1 1/2 R	11x1 1/4	68 00	30 P	14x2 1/4	228 00
1 R	12x2	105 00			
3 R	14x2	142 00	10 B	10x1 1/4	62 00
1 1/2 M	11x1 1/4	69 00	12 B	11x1 1/4	72 00
1 M	12x2	106 00	14 B	12x1 1/4	82 00
3 M	14x2	143 00	18 B	11x1 1/4	82 00
1 1/2 W	11x1 1/4	70 00	26 B	12x2	120 00
1 W	12x2	107 00			
3 W	14x2	144 00	18 S	11x1 1/4	75 00
			26 S	12x2	112 00
10	10x1 1/4	45 00	28 S	14x2	145 00
12	11x1 1/4	55 00	30 S	14x2 1/4	225 00
14	12x1 1/4	65 00	18 A	11x1 1/4	78 00
18	11x1 1/4	65 00	26 A	12x2	115 00
26	12x2	102 00	28 A	14x2	152 00
28	14x2	140 00	30 A	14x2 1/4	228 00
18 R	11x1 1/4	68 00	18 E	11x1 1/4	78 00
26 R	12x2	106 00	26 E	12x2	115 00
28 R	14x2	142 00	28 E	14x2	152 00
18 M	11x1 1/4	69 00	30 E	14x2 1/4	228 00
26 M	12x2	107 00			
28 M	14x2	143 00	2	10x1 1/4	37 00
18 W	11x1 1/4	70 00	3	11x1 1/4	45 00
26 W	12x2	108 00	4	12x1 1/4	53 00

Glass.—A redeeming feature of the present condition of the American Window Glass trade is the comparatively small stocks in manufacturers' hands. The falling off in demand, which has been noticeable in the Glass market for the past two or three weeks, continues, and indications are not encouraging for an immediate change in this direction. Prices are weak, and while factory quotations are 85 and 5 per cent. discount for single, and 85 and 10 per cent. discount for double strength Glass, it is understood that these prices are shaded in some instances. Western jobbers are quoting 85 per cent. discount for single, and 85 and 5 per cent. discount for double strength Glass in full boxes. American Plate and imported Window Glass remain unchanged in price and demand.

Mississippi and Missouri Valley Hardware Association.

(By Telegraph.)

THE OPENING SESSION of the seventh annual meeting of the Mississippi and Missouri Valley Hardware Association was held on Tuesday afternoon in the Hotel Lafayette, at Lake Minnetonka, Minn. T. G. Walther, president of the association, occupied the chair, H. M. Hill acting as secretary. The houses in attendance were as follows, represented by the persons named :

JANNEY, SEMPLE & CO., Minneapolis,
H. M. HILL and F. B. SEMPLE.
C. W. HACKETT HARDWARE Co., St. Paul, C. W. HACKETT and T. G. WALTHER.
FARWELL, OZMUN, KIRK & Co., St. Paul, F. A. BOSTWICK.
R. D. CONE Co., Winona, Minn., W. J. LONDON.
SCHREIBER, CONCHAR & WESTPHAL Co., Dubuque, Iowa, J. W. CONCHAR.
KNAPP & SPALDING Co., Sioux City, Iowa, C. A. KNAPP.
C. E. FAETH, Sioux City, Iowa.
DRAKE HARDWARE Co., Burlington Iowa, WALTER SCHENCK.
LEE-CLARKE-ANDRESEN HARDWARE Co., Omaha, E. M. ANDRESEN.
RECTOR & WILHELMY Co., Omaha, A. V. RECTOR.
WYETH HARDWARE & MFG. Co., St. Joseph, Mo., R. K. KAPPER.
J. W. CRANCER HARDWARE Co., Leavenworth, Kan., J. W. CRANCER.
RICHARDS & CONOVER HARDWARE Co., Kansas City, A. L. RUHE.
HUBER & KALBACH Co., Oskaloosa, Iowa, C. HUBER.
MARSHALL-WEELS HARDWARE Co., Duluth, A. N. MARSHALL.

In addition to the above the Nicholson File Company of Providence, R. I., were represented by their president, Samuel M. Nicholson, and the Withington & Cooley Mfg. Company of Jackson, Mich., by their secretary, T. H. Russell. Samuel Disston of Henry Disston & Sons, Philadelphia, was expected to be present but telegraphed that he was detained on account of sickness.

The first business was the election of new members. The name of Nicolas & Dean Company, St. Paul, was presented, and they were elected to membership.

President Nicholson of the Nicholson File Company was then introduced and made an interesting address, taking the word "increment" as his text.

J. W. Conchar then read a paper entitled "Can the Manufacturer Successfully Sell to Both the Jobber and the Retailer." The subject was well handled from the standpoint of a manufacturer and led to an interesting discussion. It was agreed that much good could be accomplished by closer communication with manufacturers, and a motion was therefore passed that each member should furnish the secretary with a list of manufacturers to be invited to attend the next annual meeting of the association to discuss matters of mutual interest.

A. V. Rector next read a paper on "The Credit Man," which was listened to with keen relish and met with the hearty approval of the members. After a short discussion the meeting adjourned until 9 o'clock Wednesday morning.

The discussions promise to be exceedingly pleasant and profitable, deep interest being taken in the proceedings. The association is on an excellent

footing, embraces a very large majority of the jobbers in the territory covered, and handles practical questions in a business-like way which insures successful results. A full report of the meeting will appear in our next issue.

Export Notes.

EDWARD C. MILLS of the old-established firm of E. W. Mills & Co., Wellington, Hardware and Metal merchants and importers of Agricultural Implements and Machinery, arrived at San Francisco by the last mail steamer from Wellington, New Zealand. Mr. Mills is making a tour through the States to look up the firm's business friends, and is also on the lookout for any new and desirable novelties in the Hardware, Coach Builders' and Agricultural Implement business. His address until the middle of September will be E. C. Mills, care Post Office, New York City. This business was established in 1854, and the concern are favorably mentioned by reliable houses in this city.

B. F. Clawson of Clawson & Gilmor, manufacturers' export agents, 52 New street, New York, returned to Europe a short time ago on a business trip, in the interest of the concerns they represent. His first trip abroad in this connection was made earlier in the year, he having got back here in April last.

Consul Tingle reports to the Department of State, from Brunswick, Germany, directing attention to an excellent opening for American vehicles in that country. Although the roads are referred to as the best to be found, the wagons in use are the worst, being heavy, cumbersome and very crude. The many varieties of farm and other vehicles, both for work and pleasure, made in America, are said to be unknown there. The point is made that our wagons are lighter, handsomer and better adapted to their undersized horses, and as it is his belief they can compete successfully in price, an effort should be made by manufacturers here to secure a portion of this trade. He adds that the vehicles if rough and unpainted can be imported into Germany with a duty of 36 cents per hundred pounds, the painting and finishing of which could be done cheaper there than here. The same goods, entirely finished, are scheduled at \$1.20 per hundred pounds duty. In his opinion our goods could be marketed at about the same price as the heavy, inelegant and ponderous German wagon.

MR. ULERY, formerly in charge of the New York office of the Clauss Shear Company, but for a year or so managing their export business in London, England, reports a steady increase in the European demand for goods of their manufacture.

Letters from the Trade.

Our readers are invited to discuss in these columns questions of trade interest connected with the manufacture or sale of Hardware. We shall be pleased to have a free expression of opinion on subjects deserving the attention of Hardware merchants and manufacturers.

The Future of the South.

The following communication from John R. G. Pitkin, president of the Pan-American Company of this city and recently United States Minister to the Argentine Republic, will be read with interest as discussing the position which the South in his judgment is destined to occupy in manufactures and commerce :

The man who ignores the South in his forecast of our early national future makes a serious mistake. A giant is waking from a long slumber. Every year she is less a spendthrift of energies, not only to harvest a staple but to detain it for conversion till it goes forth to market a consummate labor product; every year she will reverse more and more the old policy that dismissed the spindle to Manchester and Lowell. Her only "reconstruction" is industrial and in the hands of herself and her labor recruits. There is an economic undertow which her political Canutes cannot arrest and from whose advance they must recede. Every year henceforth the shirt sleeve at her Birminghams, Atlantas and elsewhere will do more than her broadcloth in Congress until the purpose in the one shall become the motive of the other. A broad field of abundant, staple, cheap coal, cheap iron and new energy is a pledge of great achievement. That Northern capital will reinforce her 2,000,000 of spindles and avail itself of a venue of 12 more work hours per week, and at a less wage rate, and plant mills where fuel and transportation involve less outlay is certain.

And these conditions toward less cost to the consumer of her fabrics will assure her a manifest advantage as a competitor in their distribution. Her multiplying factories will be her primary immigration bureaus and behind the wage winner thus secured farmers and tradesmen will, as usual, follow to serve him, and artisans to discover and convert whatever raw material she has on or under her soil. Cityfuls of dwellings, furniture and spars wait in her woods, an incalculable store of mechanical sinews in her ore and the sustained breath of new centuries in her fuel; she has only to be an Old or New England in manufactures as she is an India and Turkestan in cotton and a Wales and Pennsylvania in iron and coal. Her growth and outreach are inevitable.

The whole country has too long been provincial, content with interchange within its vast mesh of river, rail and wire. There has been an intellectual shrinkage not simply from continent to nation, but down to State and even to county and town; and now the North, by reason of its marvelous development of industrial energies, must have more than domestic buyers; the reclaimed West vastly accentuates this need and the South contributes by her new vigors to a national demand for nothing less than a continent of consumers. The West, in her impetuous growth in manufactures, will more determinedly divide her paths for output seaward and dispatch a much larger measure of her freights down the Mississippi Valley to waiting steam at its Gulf gate rather than lengthen by wheel to the Eastern seaboard the triangle on which by keel via Liverpool we too often seek Latin America. To

that great carrier, the Father of Waters, the South Atlantic steam path and an Isthmian canal will be appendices for the distribution of Western and Southern labor products down both the coasts of South America. The Mississippi and its tributaries may be compared to a tree with laden branches whose health largely depends henceforth upon the reach and growth of its Latin-American roots. The section that failed by war to retire its States from the national pact will push us to a peaceful invasion of all our American nations and she is already weaving for it a banner of coarse cotton that will especially assure us a welcome on the Latin area. Again, Southern men, in tendering their swords to Egypt, found her soil suitable for sea island cotton, and by use of its seed have developed crops of fine staple for European and for our own looms whose superior well-dyed cloths and hosiery we wear. England, to whose succor the South looked during the war, is rapidly developing her Indian cotton crop for her 40,000,000 of spindles and Russia, whose product is fast supplanting our export there, teaches the South to assert with the loom an independence like that which she is herself asserting with the hoe.

By reason of overproduction by machinery the North is suffering from congestion and converted 283,000 less bales than last year on her 14,000,000 of spindles; by overproduction of the staple the South has found a large surplus product on hand and declared through economic conventions and five State Commissioners of Agriculture for a diminution of her cotton acreage, although England has exceeded its demand upon her over last season by 680,000 bales and the Continent by 314,000. All this admonishes the South in respect of cotton, like the North in respect of breadstuffs, that it is perilous to depend upon countries which buy from us a staple only till they can supplant it or in order to hold markets which we can as well furnish when we are Latin-America's manufacturer rather than Europe's farmer; and the North is equally admonished that it may readily distribute southward its surplus manufactured product, but that in commerce, as in agriculture it cannot expect a harvest beyond the line to which it sows.

With all her enormous yield of staple the South is growing weaker in Europe, yet at the loom can challenge Europe and push her commercial frontier down to Cape Horn. She must outreach less bale and more fabric. The stream of immigration to her area will bear new opinion just as the Mississippi bears the soil of the West in solution, wears off old angles and builds batture-land in Louisiana. During my tenure at Buenos Ayres numerous letters of inquiry came from the United States to the Legation concerning Argentine conditions in invitation to the new comer and revealed unrest and impatience for a less crowded field. In consequence both of the occupation of our Northern area and of a pressure due to a constant influx of labor from Europe, I have no doubt that Latin-America will drain from us a large element which, Americanized here and then domesticated there, will prove for us a most valuable army of occupation. But while this immigration will stimulate a demand there for our commodities,

there should be no less an immigration into our own South where homes are cheap, to reinforce her power to supply that demand. The energy with which the prostrated South rose from the battle field, seized her material, explored for and found yet other wealth and adapted these resources to new ends till staple is fabric and ore is steel, is surety for her greater mastery under the spur of more happy conditions in which she recognizes her opportunity and powers. She was bankrupted by war only on her superfluities; her richest assets still remained for hoe, pick, furnace, loom and rail to illustrate. She could not borrow and had to burrow; she could not command capital till she unlocked an Eldorado of her own. The discipline of her trial has left her seasoned, self-reliant and frugal, and her every cotton seed mill represents her effort to convert even waste to profit. That Northern spindles will move down to the plantation seems certain; that the South will face south for outreach seems also certain. Uruguay, which has not a loom, has recently received from a European syndicate a proposition to establish at Montevideo a large woolen factory in order to convert La Plata wool near the fold and thus save to the consumer there two Atlantic freight charges and insurance and middlemen's rates. Thus our Northern spindle should advance to the Southern staple.

Repair Shops in Connection with Hardware Stores.

In addition to the letters relating to repair shops in stores published in *The Iron Age* August 2, the following letters indicate to some extent the interest taken by the trade in this matter. Correspondents in some instances have expressed themselves anxious to profit by the experience of others regarding repair shops, of which the following, from a Texas concern, is an example :

We have not a repair shop at present but intend to add this feature to our business. We will want to do gun and lock work, bicycle work and repairing generally, and we would be glad to have ideas in regard to needed outfit for the business.

It is reasonable to presume that firms who anticipate, in a conservative manner, the demands of the public by introducing new features and new lines, attract special notice and add to their popularity and profits. A Michigan merchant made arrangements with a party capable of making repairs to run a shop in connection with his store which has proved of advantage to both, as will be seen from the following letter :

The repair shop in connection with my store is not managed by myself, but was started in this way : A party who had traveled for a harvester company for a few years and then worked a season in a bicycle factory was looking for a place in which to start a bicycle repair shop. As I make a specialty of bicycles I thought it would be a good idea to have a repair shop, as it would be a good talking point in selling a machine to urge the fact of quick repairs in case of an accident. The party running the shop does bicycle repairing, repairs locks, lawn mowers, wringers, binder knotters, in fact, does general repairing; also puts in electric bells. In the way of tools he has a lathe, anvil, taps, dies, &c., but has not a forge, although one is needed very much, as he has to go outside to have such work

done if any job comes in which requires brazing. He has been in here about four months, and is well satisfied with the trade he has worked up.

Another Michigan concern find, it advisable to turn over small repair jobs to a shop fitted for doing such work, in exchange for which the mechanic buys his stock of them. The concern write as follows:

Our shop, which we run in connection with our business, is largely what might be styled a sheet metal working establishment, suitable for marine work. We employ from four to ten men, and very largely our work consists in making copper pipe, spoke stacks and occasionally tin roofs; incidentally we do some repair work, but the larger part of the small work of the kind mentioned by your correspondent we turn over to a shop situated near us. It is fitted with drills, forges, taps and dies, &c., for repairing everything of the small kind. We sell him his stock, and in return transfer such business as comes for us to him. He is entirely independent from other connections, and tells us he makes a good living at the business. We can see no reason why, in connection with the Hardware business, it would not be a good thing to have such a repair shop as your correspondent describes.

The following extract from the letter of an Ohio firm indicates the range of work which may be attempted with a limited supply of tools:

We have a vise and tools, and do all key making and repairing that can be done without fire. We aim to keep the bicycles we sell in running order and keep the tires repaired and cemented on. Some of this we do gratis, but mostly aim to make it pay.

A Pittsburgh concern describe their shop and tools as follows, and state that any work which they cannot do themselves they get done outside:

Our shop is on the third floor, front, good light and ventilation. It is not private, but is always open to customers who wish to see the work done. Our bench is 12 feet long, 3 feet wide, of 3-inch thick oak plank. We have no lathe nor forge, but two 3½-inch vises, one drill press, good anvil, four sets of taps and dies and all the small tools required, also a cabinet of parts, nuts, bolts, &c., set upright on bench, containing 117 compartments, and a row of hooks 18 inches long, 2 feet from ceiling, for holding tires, air tubes, rims, &c.

Another Pennsylvania firm carry on a general repair shop in connection with their store, and refer to it and the tools required in the following manner:

We find a repair shop a necessity and keep one man busy all the time and some of the time two. A large percentage of the work is on bicycles, as we have sold a large number of wheels and we find that it pays to do considerable of this work gratis for our customers, who have purchased wheels from us. We repair lawn mowers, fit up iron pumps and do any odd jobs that come our way. As to tools, we keep in use a full set of pipe cutters, dies, a small lathe, vise, files and small tools too numerous to mention. We are of the opinion that any Hardware store that sells bicycles will have to run a repair shop, and while there is no fortune in it, if it is properly looked after it will pay. One of the important features is to get a man who is handy with tools and can do the work neatly and rapidly.

A Hardware Poem.

It is not often that the pressure on our space will permit the insertion of poetry in our columns, but the following communication, which comes from a well-known Hardware house in Ohio, is so full of Hardware and teaches so important and practical a lesson that we take pleasure in laying it before our readers:

A man once opened a Hardware store
With the following goods on shelves and floor:

Hatchets and Axes all sharp to chop,
Hoes and Rakes to care for the crop,
Ringers and Rings so hogs can't root.
And Club Skates that the boys may scoot,
Locks and Knobs for store and house,
And Traps to catch a rat or mouse,
Lines and Hooks to catch big fish
(At any rate, that's the buyer's wish),
Saws and Planes and Augers and Bits
(If they're soft he catches fits),
Barb Wire and also Post Hole Diggers
That do not pay at present "figgers,"
Brushes of all kinds in quality fair
And Combs to curry the old gray mare,
Corn Cutters and also Scythes and Snaths
And wire fixings to wean the calves,
Circular Saws that go with a buzz,
Blankets and Robes that have no fuzz,
Skinem & Co.'s ready mixed Paint—
You open a can and it makes you faint—
Well Buckets, Rope and high Step Ladders
And Fish Oil Putty put up in bladders,
Pure Coach Varnish without any gum
And bell faced Hammers to pound your thumb,

Steel Ice Creepers so you can't slip,
Hollow Ground Razors to shave your lip,
Rubber Hose all nozzled to squirt
(When used it "busts" and spoils your shirt).

Firmer Chisels, both tang and socket,
American Knives to keep in your pocket,
A non-adjustable Plumb and Level
(The buyer wishes you'd go to the ———),
Knicknacks of all kinds, including Tweezers,

Husking Pins, Baskets and Fodder Squeezers,

Poultry Netting for the making of coops
And a full assortment of Chisholm Scoops,
Hazard Powder that goes with a flash
And Mincing Knives for chopping the hash,
Wrought Butts, jointed fast and loose,
And a twenty-four pound Tailor's Goose,
Boxing Gloves for banging your snoot,
Big Tin Horns, with a McKinley toot.
All these things and many more

Were kept in this famous Hardware store.
The merchant worked both day and night
And thought he was clearly out of sight.
He sold for cash when he could get it,
But most of the time he sold on credit.
He had the goods charged in great big books,

With numerous slips on small wire hooks.
It ran this way for a number of years,
Until the man's mind was filled with fears
That some of his creditors would not wait
For farmers to sell their wheat too late.
The contractors also were very slow pay—
Most of them seem to be built that way.
His goods went out at almost cost.
With nothing to offset what he had lost
He failed to avail himself of the cash per cent.,
So that all that he had to the sheriff went.

MORAL:

Buy goods as you need them; don't trust any one you have not confidence in; require frequent settlements from your customers, and don't sell goods for glory.

Australian Trade

Letter from Our Special Foreign Correspondent.

SYDNEY, AUSTRALIA, June 11, 1894.

A Melbourne merchant recently wrote to an English manufacturer deprecating in strong terms the manner of putting up and packing English Hardware, which he said often arrived as though it had been shoved into cask or case, adding that the neat and attractive packages of American Hardware tempted him to order from the States in preference whenever he could.

A Yankee traveler abroad early learns that it is a great help toward sales to exhibit the package in which his goods come out.

And it is true that a much longer list of American general Hardware finds its way into the foreign market than even five years ago. In Melbourne, where there is a heavy duty on Barb Wire, the Galvanized Wire is now imported from "the States." A local merchant has likewise done well with his agency of an American brand of Steel, while Files and Scissors, which are an essentially Sheffield line, now are growing quite popular from our side of the Atlantic.

The Victorian Parliament at Melbourne has just opened and the Tariff Revision Committee after over three months' investigation have handed in their report, recommending, to say it broadly, a reduction of 25 per cent. in general duties, changing them from 35 per cent. to 25 per cent., and a decided reduction in duties on Wagon Iron and woodwork, which have been specific, and in some lines prohibitive. It is very generally thought that this report will be the basis of immediate action, and a reduced tariff become law within a few months.

Business is certainly improving in Melbourne, though it will be a long time before trade is thriving there. There has been a fearful pulling down of wealthy men and in the cases of two or three banks whose affairs have been investigated these men have fared badly.

One capitalist had nine accounts at one bank and another had four, all for the purpose of getting large overdrafts, aggregating in either case more than the bank's capital. Our national banking law, which restricts loans on any one name to under 10 per cent. of the bank's capital, would have served a good purpose here.

The great hope of the country is its increased exports, which are confined chiefly to frozen meat, butter and grain, in addition to the great staple—wool. The butter interest has proved very profitable during the past two years, and lately the Government has sent emissaries to India and the East in the hope of increasing the export.

Increased Exports.

Melbourne Business.

Tariff Revision.

Packing Hardware.

American Hardware Abroad.

It seems very singular to Government Assistance. an American that the government is always expected to take the initiative and pave the way for trade. Why, all these colonial governments employ experts who go about the country teaching the people how to conduct dairy farms and give instruction on other subjects, such as agriculture, irrigation, &c. We are told that in one country district when the physician died the people sent down to the general government for a new doctor. Parental government with a vengeance!



W. W. Ferry.

W. W. FERRY, who for the past six years has been the Boston representative of the St. Louis Stamping Company, was recently made the recipient of a testimonial in appreciation of his business integrity and charming social character. A number of Boston's leading tradesmen in the tinware line met in the office of the Dover Stamping Company July 31, and presented him with a handsome silver and gold punch bowl, inscribed as follows: "Presented to W. W. Ferry by his business friends, August 1, 1894." Mayor Henry E. Tiepke of Pawtucket, in making the presentation, said: "We meet here to-day to say farewell to our pleasant business relations with Mr. Ferry, and to wish him godspeed and good luck in his new field of action. In joining in this testimonial competitors forget their rivalry and buyers their discounts, and all unite in tendering with the gift their best wishes for Mr. Ferry's prosperity." Following are the names of the donors: W. S. Adams, Thomas Barker, John F. Bingham, Dover Stamping Company, George H. Guest, M. J. Goffin, James W. Lothrop, L. T. Milligan, F. A. McMann, Thomas C. Newall & Co., Seavey Mfg. Company, Smith & Whittier, Usher & Osborne, W. F. Watters, H. E. Tiepke, Andrew Hawes and Clark-Sawyer Company. Mr. Ferry will join C. W. Dunlap, the veteran manufacturer of House Furnishing Goods in New York, and hereafter very largely manage the business, he having been with Mr. Dunlap, his father-in-law, from 1879 to 1888.

Paddock & Kleine, 107 Chambers street, New York, exporters, among other specialties are shipping quantities of Buggy and Wagon Wheels, either Sarven or Warner's patent, tired ready for use, at \$2.50 per set of four for ordinary buggies, ranging upward to \$8 per set for heavy wagons. The Tires are put on by Hydraulic Tire Setters perfectly true. Another feature with them, for shipment abroad, is a line of Ironed Shafts and Poles, complete with Whiffletrees, ready for painting. These goods, made of second growth hickory, are delivered in New York at \$24 per dozen for Shafts and \$60 per dozen for Poles. Cheaper grades are to be had in Shafts of various qualities, as low as \$15 per dozen and Poles in about the same proportion.

Request for Price-Lists, Catalogues, Etc

H. & J. YOUNG, 111 to 115 Du Pont street, Quebec, advise us that they are now in the jobbing business and would be pleased to receive catalogues from manufacturers of Hardware specialties and tools who have not already favored them with trade literature. They would also value information in regard to jobbing discounts, &c.

Trade Items.

C. C. CLARKE, treasurer of the Al-lerton-Clarke Company, who operate the Arcade File Works, Anderson, Ind., is now in New York, and expects to remain until about the middle of August.

WE ARE ADVISED that J. H. Graham & Co., 113 Chambers street, New York, have been made the direct representatives and sole selling agents of the Bonney Vise & Tool Works, Philadelphia, Pa., Armstead O. Bills, proprietor. The latter concern manufacture Vises and Hardware Specialties. It is the intention to ship orders direct from factory as heretofore, but nearby trade and hurry orders will be supplied from a full stock to be carried in New York.

PADDOCK-HAWLEY IRON COMPANY, St. Louis, issue a circular under date August 1 in which they announce that they will remove to their new building on the corner of Tenth and Spruce streets in that city in September. Prior to the removal the company will dispose of the stock they now have in their five warehouses at figures which they refer to as much less than ordinary market prices. They do not deem it advisable to issue a price-list owing to the unsettled condition of the market, but will be glad to name attractive prices on application. They call attention to the fact that their goods are staple largely and heavy, so that it would involve considerable expense to move them, and are thus desirous of disposing of the stock before taking possession of their new quarters.

IN A PARAGRAPH IN OUR ISSUE, 26th ult., relating to the establishment of True & Blanchard, Newport, Vt., we inadvertently referred to them as located at Brattleboro. True & Blanchard are Hardware merchants, and also manufacturers of several specialties.

THE ATTENTION OF THE TRADE is directed to the advertisement of the Garland Chain Company, Rankin, Pa., manufacturers of Eureka Weldless Chain, which appears on another page. The fact is referred to that this Chain is made by automatic machinery, thus securing the greatest possible uniformity. The announcement is made that the Chain can be furnished in Coil Chain or made up in Trace Chains, Tie Out Chains, Halters, &c. It is also cut to special lengths as ordered. The Garland Chain Company were organized about a year ago, and have finished the erection of a very commodious plant at Rankin, Pa., on the line of the Baltimore & Ohio Railroad, about 8 miles from Pittsburgh. The officers of the new concern are John W. Garland, president, and Robert Garland, treasurer.

VAN DERWERKEN, RICKERSON & BRAINERD, 8-10 Fifth avenue, Brooklyn, N. Y., a new concern recently organized to manufacture Electrical Specialties are directing attention to Primary Batteries for power and

lighting, Telephones, Transmitters, Motors, Fans, &c. They put in telephone plants in towns and villages where the law does not interfere with stringing overhead wires, or can supply outfits for houses, factories, between house and stable, &c. They also make a reading lamp outfit which is being utilized by surgeons, physicians and others, owing to the improved light afforded, which is useful for sudden operations or examinations at night. They likewise manufacture Motors for light work, as running dentists' lathes, sewing machines, &c.

ARCADE FILE WORKS, Anderson, Ind., have just started up a new addition to their works, consisting of a one-story extension to their cutting shop. It has a slate roof, and skylights in the roof, which will insure good light. Additional machinery is being built in their machine shop, which when finished will be placed in this building, and when fully equipped will admit of working 150 new cutting machines to advantage. Their supply of natural gas they consider good for many years to come, they supplying from their own wells five other manufacturing establishments. A theory which obtains there is that whenever the gas is exhausted oil will follow the removal of gas pressure.

C. L. MUNGER, 142 Lake street, Chicago, has been appointed general agent for the Bonney Vise & Tool Works of Philadelphia, and will carry a stock of their goods in Chicago for prompt shipments to the Western trade.

WE ARE ADVISED by Butts & Ordway, Boston, that their Sure Grip Tire Upsetter is so constructed that one motion performs the work to be done on a Tire in a satisfactory manner; and that with it a Tire can be kinked with ease. The machines are provided with interchangeable steel dies, and each mechanism is thoroughly tested before it is permitted to leave the factory. The firm's advertisement appears in another column.

GEORGE P. BENJAMIN, 104 Chambers street, New York, well known in the trade as the representative of a number of prominent manufacturing concerns, has recently returned from an extended visit to the Pacific Coast, Alaska having also been included in the trip. In Portland, Ore., he being there during the great flood, his business calls were made in a boat, in some cases entering stores through second-story windows. The Columbia River, the cause of the inundation, was in places 35 miles wide. The bulk of Alaskan trade, he observed, was done through Puget Sound points. In consequence of floods the return trip was made over the Canadian Pacific, via Montreal. At the last annual election Mr. Benjamin was elected president of the Fulton Club, he having been one of the original incorporators and at different times its secretary and vice-president. He is also a member of the Hardware and Union League Clubs.

THE M. W. ROBINSON COMPANY, 79 Chambers street, New York, manufacturers of Mechanics' Tools and Hardware Specialties, are sending out a descriptive illustrated catalogue of their goods. Among the articles are Bit Braces, Miter Boxes, Saw Sets, Levels, Wire Cutters, Hack Saw Frames and Blades, Lock Jaw File Handles, Universal Squares, Hollow Handle Tool Sets, Spring Hinges, Marking Awls, &c.

WILLARD & ADAMS, 310 Broadway, New York, agents for Lamson & Goodnow Mfg. Company's Table Cutlery and A. F. Towle & Son Company's Sterling Silver and Plated Flat Ware, have recently been made the agents of the Holley Mfg. Company, Lakeville,

Conn., manufacturers of high grade Pocket Cutlery. The latter company are one of the oldest makers of American Pocket Knives and were established nearly 40 years ago. Until now we are told they have never had a New York headquarters. A full line of stock and samples will be carried at the New York store.

M. C. HANTON, dealer in Builders' Hardware, formerly at 63 Reade street, New York, is now at 103 Chambers street, having secured suitable accommodations on the street floor in which to properly display samples of goods dealt in.

NEW YORK WIRE CLOTH COMPANY, whose New York headquarters were formerly in the Stewart Building, are now in a suit of offices at 102 Chambers street, corner of Church street.

WHITE, VAN GLAHN & Co., Chatham square and Catharine street, New York, have in their possession a curious old cash book used by the founders of the house as far back as 1816, which was then known as L. & T. Seymour. Using this as an authority they date the establishment of the business from that year; but the late Charles Merrill, who, at the time of his death in the spring of 1893, aged 93 years, was probably the oldest Hardwareman in New York, said he had often heard his father say the business was begun in 1812. Indeed, coming to New York from Hartford, Conn., in 1813, he began his long commercial career with the old concern at the same location in 1813. This house, known later as W. N. Seymour & Co., and now as White, Van Glahn & Co., has long been recognized as a headquarters for Mechanics' Tools, Builders' Hardware, &c. The present head of the concern, E. C. Van Glahn, is one of the governors of the Hardware Club.

THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio, are distributing a circular calling attention to their Quick Shot Metallic Cartridge, which they hope to have on the market on or about September 1 next. They announce that their new buildings are now finished and improved machinery is being installed for the production of this additional line of goods.

E. BISSELL, SON & Co. among the Special Notices in this issue announce a special unreserved trade sale of Hardware, Edge Tools, &c., on Tuesday, August 14. This sale will comprise Cast Steel Hammers, Hatchets, Axes, Squares, Plumbs and Levels, Auger and Car Bits, Cleavers, Butts, Corkscrews, &c., as well as 50,000 Long Reach R. F. Cartridges, &c. By order of Wharton, Bakewell & Co. of Pittsburgh the balance of their stock of Shelf Hardware will also be disposed of.

ALFRED WEED, vice-president and general manager of the Arcade File Works, Anderson, Ind., is now in New York on a visit East.

It Is Reported—

California.

That the Hardware store of Barrett, Hicks & Co., FRESNO, was entered by burglars on July 10, and Pistols and other articles to the value of \$300 stolen.

Colorado.

That the Hardware firm of McCormick & Mayes, IDAHO SPRINGS, have been dissolved, Mr. Mayes having disposed of his interest in the business.

Illinois.

That the Hardware store of Wightman & Son, at CHENOA, was consumed by fire on the 24th ult. Their loss is estimated at \$6000.

That Henry Bartling has disposed of his stock in the Urdike-Cratty Hardware Company, LITCHFIELD, to John H. Leonard.

Indiana.

That the WAYNETOWN Hardware store of Field, Coons & Hays was burglarized on the 20th ult.

That C. C. Nave has purchased John Provines' interest in the Hardware firm of Dickover & Provines, HUNTINGTON. The firm style will hereafter be Dickover & Nave.

That Lett & Anderson is the style of a new Hardware firm at CENTER.

That the firm of Clark & Pruitt, at EDINBURG, were established in June. They deal in Shelf and Heavy Hardware and Iron and Steel.

Iowa.

That the Hardware stock of Stebbins Bros., BONAPARTE, has been purchased by Vandermulen & Co. of PELLA.

That Swem & Rusk's Hardware store, at BELLE PLAIN, was destroyed in a large fire at that place on the 29th ult.

That a fire at MARION consumed the Hardware store of J. W. Kendall, involving a loss on building and stock of \$16,000, with an insurance of \$6,000.

Louisiana.

That Rice, Born & Co., Limited, New Orleans, have purchased from the liquidators of the Rice-Born Hardware Company the entire business of the old firm. The business will be continued in the same establishment under the auspices of the new management.

Maine.

That a new Hardware store will soon be opened by A. P. Gould at AUGUSTA.

Massachusetts.

That Geo. A. Cowden has purchased the Hardware business at JAMAICA PLAIN which was established three years ago by Nelson Cleveland.

Michigan.

That Chas. Wolohan and B. W. Deyo have purchased the Hardware stock owned by the Rice estate at CLIO.

That L. C. Hunter's Hardware store, at SABANAC, was destroyed by fire on the 31st ult. Loss \$4000.

That the Hardware store of Emil Jochen, at SAGINAW, was recently damaged by fire to the extent of \$1500.

Minnesota.

That J. B. Grinley is the proprietor of a new Hardware and Tin store at KENYON.

That Fred. Eikhoff of St. HILLAIRE has purchased the Hardware stock of E. Stranahan at THIEF RIVER FALLS.

That a short time since J. D. Good's Hardware store, at MORRIS, was robbed of \$100 worth of stock.

Missouri.

That the Hardware store of Gillespie & Son, JACKSON, was robbed on the 11th ult.

That Bernard P. Herndon has been admitted to partnership in the Hardware business of O. M. Henderson of BRAYMER.

That J. L. Solomon has sold his stock of Hardware at NEW HAMPTON to Stapleton Bros. of ALBANY.

That Grant Stipp and H. B. Wolgamott have purchased the Hardware business of Connell & Co. of DOWNING.

That J. C. Ambrose and R. Balthrope of PATTONSBURG have bought the stock of Hardware formerly carried by J. Whiteman, at MARCELINE, and will continue the business.

That the Paddock-Hawley Iron Company of St. LOUIS will in September remove to their new building on the corner of Tenth and Spruce streets in that city.

Nebraska.

That Wheeler Bros. have sold their stock of Hardware and furniture, at TABLE ROCK, to James Tillotson and

W. S. Linsley. The new firm style will be Tillotson & Linsley.

That Carlisle's Hardware store, at MISSOURI VALLEY, was entered by burglars a short time since and \$200 worth of Hardware stolen.

New York.

That James P. Mower's establishment, at ATHENS, was badly damaged by fire on the 23d ult. The loss is estimated at \$10,000.

That the Hardware store of Chas. W. Hull of WASHINGTONVILLE was robbed of \$50 worth of stock on the 23d ult.

Ohio.

That H. W. Tonner has bought out Geo. Harper's Hardware store, at STEUBENVILLE.

That the Hardware and Implement store of W. A. Hughes & Co., HICKSVILLE, was damaged by fire to the extent of \$10,000 on the 26th ult.

That on the 29th ult. thieves entered the store of Hannan & Obitt, ELYRIA, and stole a large quantity of Cutlery and Fire Arms.

Pennsylvania.

That in a large fire at MAHANAY CITY, on the 27th ult., the Hardware store of Thomas Joyce was consumed.

That a large frame building and Hardware store owned by A. J. Hicks, at FAIRCHANCE, was totally destroyed by fire on the 31st ult. Loss on building, \$1350; on stock, \$3000; insurance on all, \$2500.

That Horace E. Dengler has sold his interest in the Hardware firm of Beddall & Dengler, SHENANDOAH.

That the City Supply Company is the style of a new concern recently established at SHENANDOAH. The company are doing both a wholesale and retail business in Shelf and Heavy Hardware, Implements, Wooden Ware Iron and Steel, Guns and Ammunition, Fishing Tackle, &c. John Gregory is manager.

South Dakota.

That the Hardware store of G. F. Johnson, REDFIELD, was burglarized on the 24th ult.; \$75 worth of Knives, Razors, &c., were carried off by the thieves.

Texas.

That the Forney Hardware Company's store, at FORNEY, was burglarized on the 17th ult., about \$250 worth of goods being secured by the thieves.

That Bering & Cortes, HOUSTON, have become the Bering-Cortes Hardware Company. J. H. Schumacher has been admitted as a member of the firm.

West Virginia.

That the Hardware and Implement firm of Houston, Sliffe & Co., WHEELING, were dissolved by mutual consent on the 30th ult., J. M. Houston retiring. The business will be continued by the Wheeling Hardware Company, composed of John W. Sliffe, A. S. Rouk and Chas F. Braunlich.

Wisconsin.

That the Madison Hardware Company, MADISON, have sold out their business.

That the JANESVILLE Hardware firms of Crummy & Brooks, Holloway & Johnson, George A. Lamphier, Lowell Hardware Company and A. H. Sheldon & Co., have signed an agreement by which they will hereafter do a strictly cash business.

That Moody & Meckelburg's Hardware store, 598 and 600 National avenue, MILWAUKEE, was entered by thieves on the 19th ult., who got away with a quantity of Pocket Knives and other articles.

That Messrs. McKellips & Bissell of ARLINGTON have opened a Hardware store at MORRISONVILLE.

That in a large fire at ANTIGO on the 25th ult. the Hardware stores of Herze l

& Leykorn and Kohl & Tollefron were destroyed.

The Hardware trade throughout the country are requested to report business changes, improvements and other matters of trade interest suitable for mention in this department.

Price-Lists, Circulars, &c.

THE TANITE COMPANY, Stroudsburg, Pa.: Tanite Emery Wheels, Gummers, Automatic Planer Knife Grinder, Emery, Solid Emery Oil Stones, Emery Knife Sharpeners, Polishing Paste, Liquid Polish Knife Powders, Aluminous Paint, Solid Emery Bricks, Blocks, Rub Stones, &c.

FARWELL, OZMUN, KIRK & Co., St. Paul, Minn.: Guns, Ammunition and Sportsmen's Supplies. An 1894 catalogue, containing 104 pages, illustrates, with prices, a large variety of Guns, Rifles, Revolvers, Ammunition, Re-loading Tools, Hunting Clothing, Gun Material, Hammocks, Tents, Skates, Police Goods, Dog Collars, &c.

BARBER-KOENIG MFG. COMPANY, Hazleton, Pa.: Wire Coat Hangers, Suit Supports and Pantaloon Racks. These goods are shown in an illustrated pamphlet and price-list in many styles and forms. Many of these goods are arranged to contain the buyers' advertisement printed on decorated tin securely fastened to the wires.

WITHINGTON & COOLEY MFG. COMPANY, Jackson, Mich.: Farm and Garden Tools. A circular calls attention to fall goods, including Manure, Barley and Potato Digging Forks, Corn Cutters, Potato and Manure Hooks, Vegetable Scoop Forks and Wheelbarrows. The makers state that the Potato Digging Fork, which has heavy round tines with points not too sharp, was made last fall upon the ideas of a farmer, tested in practical potato digging by other farmers, and that it has now been added to the regular line of goods.

JOHN HASSALL, 63 Elizabeth street, New York: Escutcheon Pins, Small Wire Nails and Rivets made from brass, iron, copper, German silver, &c. Hinges and Catches are also made for cigar boxes, fancy wood boxes, plush cases, jewelry cases, &c. A circular relating to these goods states that the business was established in 1850.

RANSON HARDWARE COMPANY, Burlington, Vt.: Bronze Metal Specialties. In their illustrated catalogue and price-list the company state that they have just completed their new factory, fitted with new and improved machinery which gives them every facility for promptly filling orders. Also that they are prepared to make Brass, Bronze and Aluminum Castings from $\frac{1}{4}$ ounce to 500 pounds, and to do every kind of polishing, finishing and coloring.

HUBLEY MFG. COMPANY, Lancaster, Pa.: Catalogue of Lancaster brand of Iron Mechanical Toys, including passenger and freight trains, locomotives, gravity, elevated and trolley railways, Columbian wheels, wagons, drays, trick banks, fire engines, hose wagons, hook and ladder trucks, dump and coal carts, chariots, &c. Many of these are propelled by a clock spring. They also illustrate a number of specialties in Cabinet, Stationers' and Staple Hardware and are increasing the line. A. C. Dexter is the New York manager, with salesroom and office at 79 Chambers street.

SIMMONS HARDWARE COMPANY, St. Louis, Mo.: Lamps and Lamp Goods. Their No. 226 catalogue for 1894-95, of 202 pages, illustrates the Meteor, Victor and Rochester Central Draft Lamps, in banquet, piano, parlor, n-wel post,

pulpit and library styles; also Hanging and Hall Lamps, Chandeliers, Glass Lamps, Bracket Lamps, Founts, Chimneys, Lanterns, Oil Cans and Tanks, Tripods and Shade Rings, Shades, &c. The company remark that they carry in stock a complete and comprehensive line of Lamp Goods, from the cheapest Glass Lamps to those of the most artistic design, and that customers can save time, boxing, cartage and freight by ordering these goods from one house.

CAVERHILL, LEARMONT & Co., Montreal: Arms and Ammunition. An 1894-95 catalogue illustrates Guns, Rifles, Revolvers, Gun Implements, Ammunition, &c.

LOVELL MFG. COMPANY, Erie, Pa.: Supplement to their 1893 catalogue. In response to a demand from the trade for Wringers made with soft rolls, such as were put into Wringers 20 years ago, the company have put a line of these goods on the market, of which illustrations and prices are given in this supplement. The Wringers are to be known as the Lovell Guarantee Clothes Wringer, each roll bearing the makers' trade-mark, and guaranteed by them to be of the finest grade of rubber. The Wringers are made in eight styles, each in many sizes; also in bench Wringers.

Paints and Colors.

It should be understood that the prices quoted in this column are strictly those current in the wholesale market, and that higher prices are paid for retail lots. The quality of goods frequently necessitates a considerable range of prices.

White Lead.—While not more so than they have been for some time past prices are still uneven. Some distributors state that there are as many prices as there are brands and it is an open secret that the "trust" meets competitors' rates quietly, although making no changes in list prices. While the contest goes on buyers deviate little from ordinary course of buying, and it is the exception that orders are placed for more stock than is almost certain to be wanted within a period of 30 to 60 days. Generally speaking, business is only fair for the season and prices, as quoted, are nominal in a great measure.

Red Lead.—Some increase is noted in the volume of business, particularly for near future deliveries in which foreign brands figure somewhat prominently, but there is not enough doing to turn values for the better and the market shows ragged tone.

Litharge.—There is rather more business, particularly in the direction

Colors.—Leading lines of dry Colors have been selling a little more freely, chiefly to grinders, but the business that comes up is easily taken care of and former low prices prevail nearly all along the line. There is no improvement in the sale of Oil Colors or Mixed Paints, and prices for these remain without radical change.

Oils and Turpentine.

Linseed Oil.—Offers have been made of some interior brands at 51¢ @ 52¢, and orders were solicited for car lots at 50¢ in a manner indicating that purchases could be made at that price for late autumn delivery. City crushers and the allied Western concerns profess to be securing about the usual business at steady prices, say the basis of 54¢ for city made Raw. Business is rather light at present, and the demand shows no sign of increase.

Cotton Seed Oils.—Dealings have not been above the average for this, a usually dull period of the year. Buying interest was very tame also and the market has a flat, sluggish appearance, with prices probably 1¢ per gallon lower than they were a week ago. Prime Crude was sold at 28¢ @ 28½¢ and Prime Summer Yellow at 32¢ @ 32½¢ on the spot. Other grades went at corresponding figures.

Lard Oil.—Buyers have operated in a very indifferent manner. They have taken none but small parcels for immediate delivery and done hardly anything in the way of placing orders for future shipment. The most of the business effected was at prices on the basis of 53¢ @ 54¢ for prime.

Fish Oils.—Nothing of special interest has developed in the market for crude Menhaden, Whale or Spermin Oils. Sales have been moderate and the demand is still very tame, while sellers' prices remain about the same as they have been for several weeks. The pressed and bleached Oils are selling in a moderate way at about former prices.

Spirits Turpentine.—There has been some contest between the Southern combination and independent dealers. For a time the combined interests were at some disadvantage, but they seem now to have quite a firm grip upon the market. Prices have been raised to 29¢ for regular and 29½¢ for machine barrels.

Ball's Diagonal Corrugated Bread and Cake Knife.

The cut shown herewith represents a bread and cake knife offered by the Aluminum Novelty Company, Canton, Ohio. The blade is corrugated diagonally



Ball's Diagonal Corrugated Bread and Cake Knife.

of providing for early autumn wants by grinders, but supplies seem to be reached without difficulty at late lowest prices and the market shows rather weak tone. Quotations are, however, without important change.

Zincs.—The orders placed for American Oxide have been only fair, and it is doubtful if large consumers have gone as far ahead as usual in the matter of anticipating fall season requirements. While the market is thus rather dull prices remain quite steady. Foreign brands are somewhat irregular and rather weak, but not positively lower.

nally and may be sharpened by grinding it on one side, which brings out the sharp cutting points on the opposite side. The makers claim that the knife cuts easily, making a clean cut, and that it will remain sharp a long time. The merchant's advertisement may be inserted in the handle, thus making an excellent advertising medium. The knives are furnished in three finishes—No. 1, nickel plated; No. 2, polished only, and No. 3, polished and nickel plated. Samples are sent by the manufacturers, post paid, upon receipt of 25 cents.

Lewis Patent Vises.

Lewis Tool Company, 44 Barclay street, New York, are putting on the market a line of double steel slide bar, adjustable jaw, swivel bottom vises, the features of which are illustrated in Fig. 1. The slides consist of two flat steel bars, permanently attached to the front jaw, mounted one above and the other below the screw. The upper bar is placed with its flat surface horizontally and the lower bar with its flat surface in a perpendicular position, thus forming a detached T. This arrange-

ment unlocks and allows the jaw to be adjusted. The point is made by the manufacturers that the features as described impart to these vises the elasticity of the leg or solid box vise, with the more convenient form of the parallel vise. The line includes the following patterns of vises: Iron workers', wood workers', filers', glass molders' and die sinkers', combination pipe, open side pipe, and the Handy vise and anvil. The manufacturers state that the entire line is made of the best material, of first class workmanship and finish, and with all parts interchange-

hold other work when desired, thus avoiding the necessity of another vise for occasional use. The vise is described as being made of steel, malleable and wrought iron, and as being well finished. The combination pipe vise has heavy steel plates filling the throat of the vise, and extending almost the entire width of the upper jaws, giving a large bearing surface. The plates are deeply serrated both ways and the multiplicity of points in contact with the pipe holds it firmly, it is stated, with little pressure. It is explained that as the pipe can be held at different angles in the jaws, that the

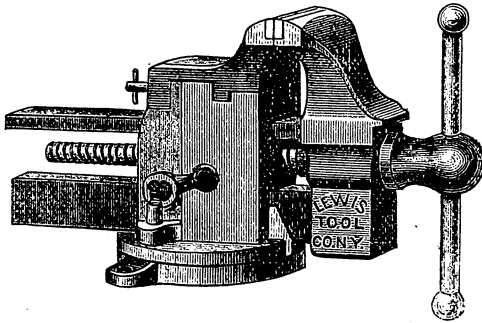


Fig. 1.—The Lewis Patent Vise.

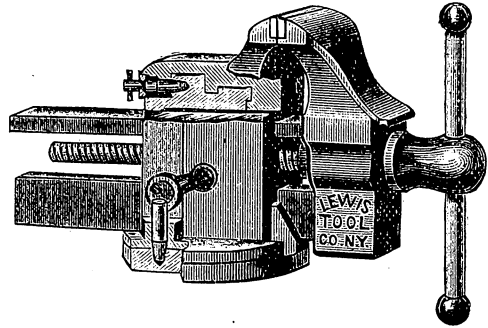
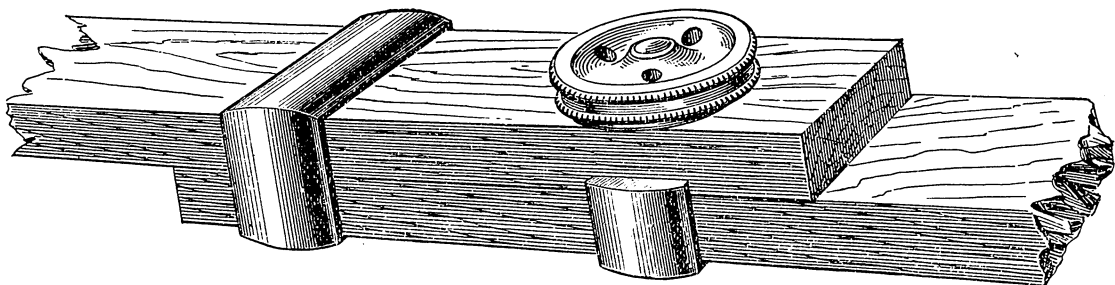


Fig. 2.—Vise Cut Away to Show Construction.

ment, it is explained, enables the bars to resist strain either at the center or sides of the vise jaws, and at the same time gives them sufficient elasticity to withstand the shock of chipping or riveting without breaking. The upper bar thoroughly protects the screw, which can be readily oiled without removing the slide. The nut through which the screw works is placed at the center instead of at the bottom of the vise, thus adding to its firmness and strength. The wing supports on the nut rest firmly against the solid body of the vise, while the back part of the nut is loose in the socket, to allow it to line with the screw and to prevent the cutting and unnecessary wear which might occur if the nut was dovetailed into the bottom of the vise; also to prevent the springing out of line when under pressure. It is stated that in the construc-

tion of the adjustable jaws the hub and supports are made extra strong. The locking pin is placed at the back end of the vise to give it purchase enough to hold the jaws firmly with little strain on the pin, as shown in Fig. 2, which is cut away to show the construction of the vise. By this arrangement the pin is out of the way and dirt and grit are prevented from entering the pin hole; it also prevents the possible loss of the pin, as it is simply drawn back to the shoulder when adjusting the jaws and not removed out of lock. A part turn of the pin is only required after it is pressed forward to firmly fasten it and the jaw in place, while the reverse move-

able. Iron workers' vises are made in the following styles: Plain and swivel bottoms, in both solid and adjustable jaws, the jaws measuring from 2 to 7½ inches in length. Wood workers' vises are made in the foregoing styles, with 4½-inch jaws; and filers' vises are made in the same styles with 4-inch jaws. It is explained that the swivel bottoms of the vises are made with a heavy hub, which is a part of the body of the vise; that this passes through the bottom plate, and is designed to take most of the strain, the bottom set screw and washer merely holding the vise down to the plate. The bottoms are provided with heavy steel side locking pins which are moved in or out of lock by means of an eccentric so as not to be thrown out of lock by any possible strain on the vise, and to allow an easy adjustment when desired. The pins



Extension Rules.

are not in any way dependent in their action upon springs. In the double swivel glass molders' and die sinkers' vise, the double swivel device allows the vise to be turned upon its bottom and the jaws to be turned completely over. The vise is referred to as being extra strong, with several new features, as admitting of a wide opening between the jaw, and as standing any reasonable strain. The vise is made in the same styles as the iron workers' vise, with jaws from 4½ to 4½ inches long. The open side pipe vise, when fastened to the front of a bench or upon a post, allows pipe to be held at different angles and small pipe to be held upright, while the vise can be used to

2½, 3½ and 4½ inches long, and are designed for the use of amateurs, farmers, &c., and for a general all around vise.

Extension Rules.

Ranson Hardware Company, Burlington, Vt., are introducing a slide rule, as herewith shown. It consists of two graduated, hardwood rules, ¾ x 1 inch in size, held in position by polished bronze metal trimmings. The thumb nut screws on a threaded post attached to the casting through which the lower rule passes. When the thumb nut is loosened the rule may be extended as far as desired and held firmly at any point by tightening the nut. A washer

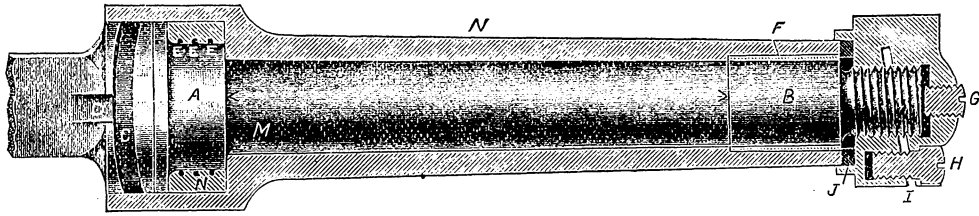
underneath the nut prevents the upper rule being marred by the nut. The rules are made in two lengths—38-inch, which extends to 72 inches, and 62-inch, which extends to 120 inches.

Spiral Groove Steel Bearing Axle and Safe Lock Nut.

The Safety Axle Company, New Haven, Conn., are offering the axle

The Unique Skewer Puller.

The accompanying cut represents a skewer puller put on the market by F. W. Hall, 178 Broadway, New York.



Spiral Groove Steel Bearing Axle and Safe Lock Nut.

Trimmings and extra rules may be obtained separately.

Rattles and Iron Toys.

N. N. Hill Brass Company, East Hampton, Conn., are offering rattles and iron toys, as illustrated in the ac-

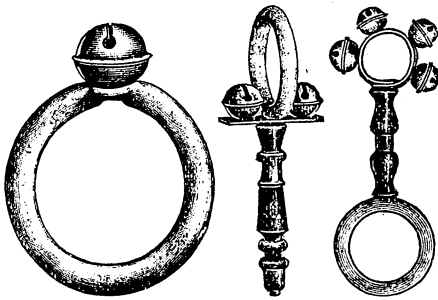


Fig. 1.—Teething Ring Rattles.

companying cuts. The rattles are made with rubber rings, as in Fig. 1, one style having a nicked bell riveted to the ring, while other styles have en-

herewith shown. The letter M represents the axle and G the nut. A is a hardened steel bushing applied to the shoulder end of the axle, while B is another hardened steel bushing applied to the nib end of the axle in a similar manner. C is a spiral groove cut in the shoulder and ending in the outlet D. This is designed as a chamber for water and sand or any other foreign substance which may work in around that end of the box. It is remarked that the tendency of the spiral is to conduct this substance toward the outlet, where it is discharged from the under side of the axle. In the box N is a hardened steel bushing which runs on the bushing A of the axle and F is also a hardened steel bushing which runs on the bushing B of the axle. E E E represents grooves cut in the back bushing, which serve as oil chambers. In the nut H represents the clamping screw and G the adjusting screw. J is a hardened steel washer driven into the nut in place of the leather one commonly in use. The nut is partially divided by a slot ending at I. In operation the clamping screw H, being tightened, draws the two parts of the nut, which are separated by the slot, nearer together, pinching the threads of the nut against the threads of the nib, which, it is claimed, prevents the nut from turning and effectually locks it. The nut is adjustable and is screwed up so that the steel washer runs up against the end of the box. The adjusting screw G forms the shoulder which is designed to prevent the nut from running up should the clamping screw be insecurely locked. The makers remark that the bearings are on the ends of the axle and not wherever they happen to come, as is often the case with ordinary axles; also that the space on the arm between the hardened steel bearings does not come in contact at all with the box. The axles are made of steel and the boxes of malleable iron, bored and reamed to fit the axle, while the nuts are of malleable iron, nickel plated, and the washers are of tool steel, oil tempered. The manufacturers claim that by the use of steel washers instead of leather in the nut and also in the box, wear is stopped in all directions, thus preventing chatter, and that by having bearings that fit a great saving is effected in lubrication, besides causing the axle to run easier.

In use the tines of the carving fork are thrust into the roast, with a tine on each side of the metal or wood skewer. The loop of the puller is placed over



The Unique Skewer Puller.

THE NUBIAN IRON ENAMEL COMPANY of Chicago are distributing a quaint advertising device. It is a piece of transparent toilet soap in which a card is imbedded, bearing appropriate printed matter, which can be read through the soap on either side. The device is similar to a glass paper weight and its novelty attracts attention.

the exposed end of the skewer, and twisted slightly to loosen it, after which a pull on the handle of the puller draws the skewer. The pullers are furnished in steel, nickel plated; steel, silver plated, and in solid nickel silver.

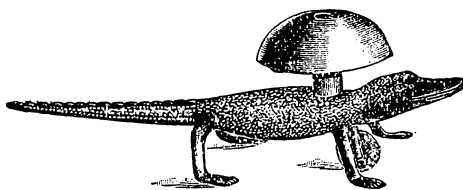


Fig. 2.—Alligator Bell Toy.

ameled handles with nicked bells riveted to russet leather. The toys are of malleable iron, painted in colors, and

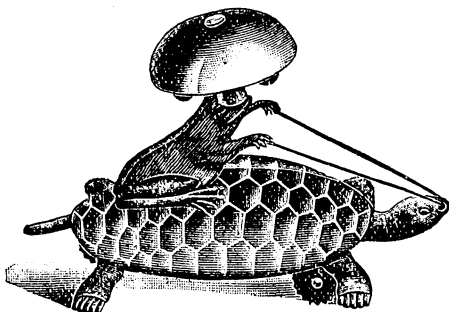


Fig. 3.—Turtle and Frog Bell Toy.

are provided with wheels to allow them to be drawn. Loosely hung clappers strike the gong when the toys are in motion.

Counter Borer and Plug Bit.

The counter borer and plug bit shown in the accompanying cuts are being of-

Murray street, New York, are agents. By turning the key to the left the shackle will unlock and automatically spring in the position shown by the



Fig. 1.—Counter Borer and Plug Bit.

ferred by the Samuel C. Tatum Company, Cincinnati, Ohio. The tool consists of four pieces—the stock, bit, drill and screw. The bit, shown full size in Fig. 2, is forged from Jessop tool steel. It is explained that the one screw not only holds all the parts together, but controls the depth of both the center hole for the wood screw and the counter bore, as when the screw is not tightened the bit and drill slide freely on each other and in the stock, thus allowing the use



Fig. 2.—Enlarged View of Plug Bit.

of the finely polished end of the stock as a depth gauge. The point is made by the manufacturers that as a counter bore the tool has many uses, and that as a plug bit it will work with any plug cutter of the same marked size.

New Adjustable Countersink.

The Samuel C. Tatum Company, Cincinnati, Ohio, are offering the adjustable countersink shown herewith. The tool is described as having a cutter of solid forged Jessop's tool steel, and a combined gauge and clamp piece of spring steel. The changes for depth of the countersink or size of drill or bit can be made in a moment, while the countersink can be easily sharpened. The face of the depth gauge is finely polished so as not to mar the finest work. The makers state that the parts are so held as to prevent either breakage

dotted lines. The shackle will automatically enter the case and securely

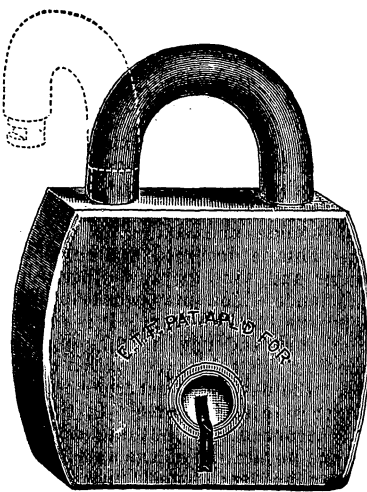


Fig. 1.—Automatic Padlock.

lock by turning the shackle to the position shown in the cut. The locks

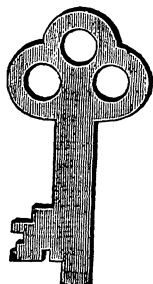
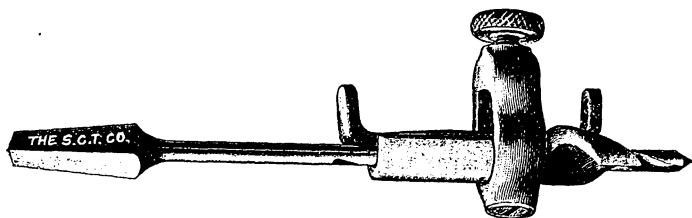


Fig. 2.—Key for Automatic Padlock.

are made in 1½ and 2 inch sizes, with flat steel keys, in both steel, finished



New Adjustable Countersink.

or slipping of the drill or the countersink, and that the tool can be used with any size of twist drill or bit from ⅜ to ⅝ inch diameter.

Automatic Padlock.

The accompanying cuts represent an automatic padlock and key introduced by the Keystone Lock Works, E. T. Fraim, proprietor, Lancaster, Pa., for whom Surpluss, Dunn & Alder, 15

in dull blue black and in cast bronze metal with bright finish.

F. R. BLAUROCK of Chicago has been appointed Western sales agent for the Avery Stamping Company of Cleveland, Ohio, manufacturers of Steel Hollow Ware. They also manufacture Steel Seats for agricultural implements, Steel Fence Posts and Steel Railroad Ties. Mr. Blaurock's field comprises the Central

Western States, in which he enjoys a wide acquaintance among the Hardware trade.

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Current Hardware Prices.

AUGUST 8, 1894.

NOTE.—The quotations given below represent Current Hardware Prices, whether made by manufacturers or jobbers. They apply to such quantities of goods as are usually purchased by retail Hardware merchants. Very small orders and broken packages often command higher prices.

The character @ is used to indicate a range of price: thus discount 50 & 10% @ 50 & 10 & 5%, signifies that the goods in question are sold at prices ranging from 50 & 10% to 50 & 10 & 5%.

Adjusters, Blind—

Domestic.....\$ dos \$3.00, 83% @ 33% & 10%
Excelstor.....\$ dos \$10.00.....50 & 10 & 5%
North's.....\$ dos \$10.00.....50 & 10 & 5%
Zimmerman's—See Fasteners Blind.

Ammunition—See Caps, Cartridges, Shells, &c.

Anvils—

American—

Eagle Anvils, \$ d 9.....15 @ 15 & 5%
Horse shoe brand, Wrought.....11 @ 11 & 5%
Moore & Barnes Mfg. Co.....35 & 5%

Imported—

Armstrong Mouse Hole.....9% @ 10%
B. & H., machine finished.....10% @ 11%
Trenton.....9% @ 10%
Wilkinson's.....10% @ 10%
Peter Wright's.....10% @ 11%

Anvil Vise and Drill—

Allen Anvil and Vise \$3.00.....40 & 10%
Cheney Anvil and Vise.....25%
Miller's Falls Co., \$18.00.....20%
Holt's.....40 & 10 & 10%

Apple Parers—See Parers Apple, &c.

Augers and Bits—

Boring Machine Augers.....70 @ 70 & 10%
Car Bits, 12-in. twist.....50%
Common Augers and Bits.....70 @ 70 & 10%
Cincinnati Bell-Hangers' Bits.....30 & 10%
Forster Pat. Auger Bits.....15%
Jennings' Pattern Car Bits.....40%
Jennings' Pattern Auger Bits.....60%
J. E. Jennings & Co., No. 10, extra.....40%
J. E. Jennings & Co., No. 30.....60%
J. E. Jennings & Co., Auger Bits, set
82% quaters, No. 5, \$5; No. 80, \$3.50 25%
Russell Jennings' Augers and Bits 25 & 10%
Lewis' Patent Single twist.....45%
L'Hommedieu Car Bits.....20%
Fugh's Black.....20%
Fugh's Jennings Pattern.....30%
Snell's Bits.....60 & 5 @ 60 & 10%

Bit Stock Drills—

Cleveland.....50 & 10 & 5%
Cincinnati, for wood.....30 & 10%
Cincinnati, for iron.....45 & 10%
Morse Twist Drills.....50 & 10 & 5%
New Process Twist Drill Co., 50 & 10 & 5%
Standard.....50 & 10 & 5%
Syracuse, for metal.....50 & 10%
Syracuse, for wood (wood list), 30 & 30 & 5%

Expansive Bits—

Clark's small, \$18; large, \$26.....40 @ 40 & 5%
Ives' No. 4, \$ dos \$80.....40 @ 40 & 10%
Steer's No. 1, \$26; No. 2, \$18.....40 @ 40 & 5%
Searns' No. 2, \$48.....20%
Swan's.....40 @ 40 & 10%

Gimlet Bits—

Bee.....25 @ 25 & 10%
Common.....\$ gross \$2.50 @ \$3.00
Diamond.....\$ dos \$1.25.....40 & 10%
Double Cut:
Hartwell's.....\$ gro., \$10.00, 40 & 10%
Douglass'.....40 & 10 & 5%
Ives'.....60 & 10 @ 60 & 10%
Shepardson's.....45 & 10 @ 45 & 10 & 5%

Hollow Augers—

Bonney's Adjustable, \$ dos \$48.....50%
Cincinnati Adjustable.....25 & 10%
Cincinnati Standard.....25 & 10%
Douglass'.....33% @ 33% & 10%
French, Swift & Co. (Beecher).....33% @ 33% & 10%
Ives'.....33% @ 33% & 10%
Ives' Expansive, each \$4.50.....50 & 5%
Searns'.....20 & 10%
Universal Expansive, each \$4.50.....20%
Wood's, \$ dos, \$48.....25 & 10%

Ship Augers and Bits—

L'Hommedieu's.....15 & 10 @ 15 & 10 & 5%
Snell's.....25 @ 25 & 10%
Snell's Ship Auger Pat'n Car Bits.....15 & 10 @ 15 & 10 & 5%
Watrous'.....25 @ 25 & 10%

Awl Hafts—See Hafts, Awl.

Awls—

Brad, Handled.....\$ gr. \$2.50 @ \$3.00
Brad, Shoulders.....\$ gr. \$1.50 @ \$1.80
Peg, Pat.....\$ gr. \$1.50 @ \$1.80
Peg, Should.....\$ gr. \$1.50 @ \$1.80
Scratch, Handled.....\$ gr. \$4.00 @ \$4.50
Scratch, Socket.....\$ dos \$1.10 @ \$1.20

Awl and Tool Sets—See Sets, Awl and Tool.

Axes—

First quality, best brands.....\$6.00 @ \$6.50
First quality, other brands.....5.50 @ 6.00
Beveled add 50¢ @ doz.

Axle Grease—See Grease, Axle.

Axles—

No. 1 Common.....3¢ @ 3 1/4¢
No. 2 Common.....4¢ @ 4 1/4¢
Nos. 7 to 14.....70¢
Nos. 15 to 28.....47¢
Nos. 19 to 22.....70¢ 3% cash
Concord Axles, loose collar.....4¢ @ 4 1/4¢
Concord Axles, solid collar.....5¢ @ 5 1/4¢
Tubular Axles.....10¢

Bag Holders—See Holders, Bag.

Balances—

Sash—
Caldwell, low list.....30%
Pullman.....60%
Spring—
Spring Balances.....40 & 10 @ 50%
No. 2000 20 80
Chatillon, \$ dos.....\$80.00 95 1.75 net
Chatillon Straight Balances.....40 @ 40 & 10%
Chatillon Circular Balances.....50 & 10%

Barb Wire—See Wire, Barb.

Bars—

Crow—
Cast Steel.....\$ d 2 1/4 @ 3¢
Iron, Steel Points.....\$ d 2 1/4 @ 3¢
Basins, Wash—
Standard Fiberware, No. 1, 10% in, \$1.80;
12-inch, \$2.00; 13% inch, \$2.50; 16-inch,
\$3.00.

Beams Scale—

Scale Beams, List Jan. 12, '82.....50 & 10 @ 50 & 10 & 5%
Chatillon's No. 1.....40%
Chatillon's No. 2.....50 & 10 @ 50 & 10 & 5%
Custers'.....35 & 5%

Beaters—

Egg—
Bryant's.....\$ gross \$14.00
Double (H. & R. Mfg. Co.), \$ gro., No. 0
\$12.00; No. 1, \$15.00; No. 2.....\$38.00
Dover.....\$ dos \$1.00 @ \$1.20
Dover (Standard Co.).....\$ dos \$1.00
Duplex (Standard Co.).....\$ dos \$1.00
Duplex Extra Heavy (Standard Co.).....\$ dos \$1.00
Easy (H. & R. Mfg. Co.).....\$ dos \$3.50
Improved Acme (H. & R. Mfg. Co.).....\$ gro. \$12.00
Silver & Co.....\$ dos \$5.50
Spiral.....\$ gro \$4.25 @ \$4.50
Triple (H. & R. Mfg. Co.).....\$ gro \$16.50
Culinary—
Keystone, P. D. & Co., Each, No. 1, \$1;
No. 2, \$2.....20%

Bells—

Cow—
Common Wrought.....60 & 10%
Kentucky Durham.....70 & 10%
Kentucky, Sargent's list.....70 & 10%
Kentucky, "Star".....70 & 10%
Texas Star.....50 & 10 @ 50 & 10 & 5%
Western, Sargent's list.....70 & 10%

Door—

Crane Brooks.....50 & 10 & 5%
Crane, Connel's.....20 & 10%
Crane, Connel's.....33% & 10%
Gong, Barton's.....40 & 10 @ 50%
Gong, Yankee.....45 & 10%
Lever, R. & E. Mfg. Co.'s.....60 & 10 & 5%
Lever, Sargent's.....60 & 10%
Lever, Taylor's Bronzed or Plated.....25 & 10%
Lever, Taylor's Japanned.....25 & 10%
Full, Brook's.....50 & 10 & 5%

Electric—

Bigelow & Dowse.....20 @ 20 & 10%
Wollensak's.....20 @ 20 & 10%

Hand—

Extra Heavy Brass.....70 & 10 @ 70 & 10 & 5%
Light Brass.....70 & 10 @ 70 & 10 & 5%
Silver Chime.....33% & 10%
White.....70%
Globe Cone's Patent.....25 & 10 @ 35%

Miscellaneous—

Call.....45 @ 50%
Farm Bells.....\$ d 2 1/4 @ 3¢
Steel Alloy Church and School Bells.....50%

Bellows—

Blacksmiths'.....60 & 10 @ 70%
Hand Bellows.....40 & 10 @ 50%
Molders'.....40 & 10 @ 50%
Common Standard.....75 & 10 @ 75 & 10 & 5%
Extra.....60 & 10 @ 70%
Standard.....70 & 10 @ 75%
N.Y.B. & P. Co., Carbon.....80 & 10 & 5%
N.Y.B. & P. Co., Double Diamond.....60%
N.Y.B. & P. Co., 1846 Para.....40 & 10%

Bench Stops—See Stops, Bench

Benders and Upsetters, Tire—

Detroit Perfect Tire Bender 15 @ 15 & 10%
Green River Tire Benders and Upsetters.....20%
Stoddard's Lightning Tire Upsetters.....15%

Bits—

Auger, Gimlet, Bit Stock Drills, &c.,
see Augers and Bits.

Bit Holders—See Holders.

Blind Adjusters—See Adjusters, Blind.

Blind Fasteners—See Fasteners, Blind.

Blind Staples—See Staples, Blind.

Blocks—

Cleveland Block Co., Mal. Iron.....50 & 10 @ 50 & 10%
Moore's Novelty, Mal. Iron.....50 @ 50 & 5%
Saw Grist Block Machine Blocks 25 @ 25 & 10%
See also Machines Hoisting.

Bolts—

Carriage, Machine, &c.—

Com. list June 10, '84.....80 & 10 @ 80 & 10 & 5%
Charter Oak, list Oct., 1884.....80%
Genuine Eagle, Norway, list Oct. '84.....80 & 5 @ 80 & 10%
Eagle, Norway, list Oct. '84.....80 & 5 @ 80 & 10%
Phila. pattern, list Oct. 7, '84.....80%
R. & W., old list.....70%
Bolt Ends, list Jan. 1, 1890.....80 & 10 @ 80 & 10%
Machine, list Jan. 1, 1890.....80 & 10 @ 80 & 10%

Door and Shutter—

Cast Iron Barrel Square.....75 & 10 @ 75 & 10 & 5%
Cast Iron Chain (Sargent's list).....65 & 10 @ 65 & 10 & 5%
Cast Iron Shutter Bolts.....75 & 10 @ 75 & 10 & 5%
Ives' Patent Door Bolts.....60 & 10 @ 60 & 10 & 10%
Wrought Barrel.....75 & 10 @ 80%
Wrt B. K. Flush Common.....60 & 10 @ 60 & 10 & 10%
Wrt Shutter, Brass Knob.....50 & 10 @ 50%
Wrt Shutter, Sargent's list.....60% @ 70%
Wrt Shutter, all iron, Stanley's.....60% @ 70%
Wrought Square.....75 & 10 @ 80%
Wrt Sunk Flush, Sargent's list.....60 & 10%
Wrt Sunk Flush, Stanley's list.....60 & 10%

Stove and Plow—

Plow.....60 & 10 @ 60 & 10 & 10%
Stove.....65 @ 70%
R. B. & W., Plow.....55%

Tire—

Common, list Feb. 28, '83.....70 @ 70 & 10%
American Screw Company.....80%
Norway, Phila., list Oct. 16, '84.....80%
Eagle, Phila., list Oct. 16, '84.....85%
Bay State, list Feb. 28, '83.....75%
Franklin Moore Co.:
Norway, Phila., list Oct. 16, '84.....80%
Eagle, Phila., list Oct. 16, '84.....85%
Keystone, Phila., list Oct. '84.....75%
Port Chester Bolt and Nut Company:
Empire list Feb. 28, '83.....75%
Keystone, Phila., list Oct. '84.....80%
Norway, Phila., list Oct. '84.....85%
R. B. & W., Phila., list Oct. 16, '84.....85%

Borers, Tap—

Common and Ring.....20 & 10%
Clark's.....35% @ 35%
Enterprise Mfg. Co.....25%
Ives' Tap Borers.....35% @ 35%

Boring Machines—See Machines, Boring.

Bow Pins—See Pins, Bow.

Boxes, Letter—

Tatum's.....40

Boxes, Wagon—

Per d.....24%

Boxes, Miter.

Spilker's Excelstor, 3 in. \$7.50, 4 in.
\$8.50, 5 in. \$13.00, 6 in. \$15.00.....20%

Braces—

NOTE.—Most Braces are sold at net prices.
Barber's.....50 & 10%
Bartholomew's.....50 & 5%
Armstrong's.....50 & 5%
Common Ball, American.....\$1.00 @ \$1.10
Davis Patent.....50 & 10%
Fray's Genuine Spotted.....50 & 10 & 5%
Fray's Nos. 70 to 120, 81 to 123, 207 to 414
50 & 10 & 5%
Ives' New Haven Novelty.....70 @ 70 & 5%
New Haven Ratchet.....60 & 5 @ 60 & 10%
Barber Ratchet.....60 & 5 @ 60 & 10%
Eaton's.....60 & 5 @ 60 & 10%
Spotted.....60 & 5 @ 60 & 10%
P. S. & W. Co., Peck's Patent.....60%
Rose & Johnson.....50%

Brackets—

Self, fancy.....70 @ 70 & 10%
Sargent's list.....70 @ 70 & 10%
Other makes at a wide range of prices.
Self, plain.....65 @ 70%
Sargent's list.....60 & 10 @ 70 & 10%
Bradley Shelf Brackets.....70 & 10%

Bright Wire Goods—See Wire.

Brollers—

Hens' Self-Inch.....9 10 9x11
Basting.....\$ per doz. \$4.50 5.50 6.50
Morgan Odorless.....\$ doz. \$12, 50¢
New Haven.....60%
Queen City.....80%
Wire Goods Co.....65 & 10%

Buckets, Well and Fire—

See Pails, Galvanized.

Bull Rings—See Rings, Bull.

Butcher's Cleavers—See Cleavers, Butchers.

Butts—

Brass—
Cast Brass, Fast.....33% @ 10%
Cast Brass, Loose Joint.....33% @ 10%
Cast Brass, Tiebout's.....50%
Wrought Brass.....80 & 10 @ 80 & 20%

Cast Iron—

Fast joint, Broad.....60 & 10 @ 60 & 10 & 10%
Fast Joint Narrow.....60 @ 60 & 10%

Loose Joint.....75 & 10 @ 80%

Loose Joint, Japanned.....
Loose Joint, Jap. with Acorns.....
Loose Pin, Acorns.....
Loose Pin, Acorns, Japanned.....
Loose Pin, Acorns, Japanned,
Plated Tips.....
Mayer's Hinges.....
Parliament Butts.....

Wrought Steel—

Fast Joint, Broad.....
Fast Joint, Narrow.....
Fast Joint, Lt. Narrow.....
Inside Blind, Light.....
Inside Blind, Regular.....
Loose Joint, Broad.....
Loose Pin.....
Table Butts, Back Flaps, &c.
Bronzed Wrought Butts.....50 & 10 @ 50 & 10 & 5%

Cages, Bird—

Hendryx Brass:
3000, 5000, 100 series.....10%
1200 series.....40%
200, 300, 600 and 900 series.....40 & 10 @ 50%
Hendryx Bronze:
700, 800 series.....40 & 10 @ 50%
Hendryx Enameled.....40 & 10 @ 50%

Callipers—See Compasses.

Calks Toe—

Burke's, One Prong, Blunt.....4% @ 5¢
Burke's, One Prong, Sharp.....5¢ @ 5¢
Burke's, Two Prong, Blunt.....5¢ @ 5¢
Burke's, Two Prong, Sharp.....5¢ @ 5¢
Gautier, One Prong, Blunt.....5¢ @ 5¢

CanOpeners—See Openers, Can.

Cans Milk—

S. S. & Co.: 5-gal., \$3.00; 8-gal., \$4.40;
10-gal., \$4.75 each.....40 & 10%
Cans Oil—
Galvanized Blue Band, 1 gal., \$ dos \$2.50
Galvanized Blue Band, 5 gal., Tip-Top.....\$ dos \$12.00
Galvanized Blue Band, 5 gal., Faucet.....\$ dos \$8.00
Glass Oil, Friend.....\$ dos \$3.75

Caps—Percussion—

Hicks & Goldmark's and Union Metallic
Cartridge Co. \$ 100¢
Eley's B. B.....50 @ 50¢
Eley's D. Waterproof, Central Fire.....\$1.50
E. B. Grand Edge, Cent. Fire, 1-10's.....\$1.50
E. B. Trimmered Edge, 1-10's.....47 @ 50¢
F. L. Waterproof, 1-10's.....35 @ 37¢
G. D.....27 @ 30¢
Musket, Waterproof, 1-10's.....50 @ 55¢
S. B. Genuine Imported.....45¢

Primers—

Berdan Primers.....\$1.00
B. L. Caps (Sturtevant Shells) \$1.00.....\$1.00
All other Primers, \$1.20.....\$1.20

Cards—

Watson's Cotton, Wool, Horse and
File, list January 28, 1891.....\$1.20

Carpet Stretchers—

See Stretchers, Carpet.

Cartridges—

B. B. Caps, Coll. Ball, Swgd., \$1.85 @ \$1.95
B. B. Caps, Round Ball.....\$1.60 @ \$1.75
Blank Cartridges, except 22 and 32 cal.,
additional 10% to above discounts.
Blank Cartridges, 22 cal., \$1.75.....25%
Blank Cartridges, 32 cal., \$3.50.....25%
Cent. Fire, Military and Sporting 15 & 5¢
Cent. Fire, Pistol and Rifle.....25 & 5¢
Primed Shells and Bullets.....15 & 5¢
Rim Fire Cartridges.....50 & 5¢
Rim Fire Military.....15 & 5¢

Carpet Sweepers—

See Sweepers, Carpet.

Casters—

Bed.....
Plate.....60 & 10 @ 60 & 10 & 10%
Shallow Socket.....
Deep Socket.....60%
Giant Truck Casters.....35%
Gwinner's Common Sense.....45 @ 50%
Gwinner's Hercules.....45 @ 50%
Martin's Patent (Phonix).....45 @ 50%
Payson's Anti-friction.....70 @ 70 & 10%
Payson's Truck.....60 @ 60 & 10%
Socket Truck Casters.....50 @ 50 & 10%
Stationary Truck Casters.....50 & 10%
Tucker's Patent, low list.....45%
Yale Casters, low list.....45%
Yale, Gem.....70%

Cattle Leaders—

See Leaders, Cattle.

Cement—

Victor Elastic.....5 d pails \$ 8
Chain—
American Coll. in cask lots,
3-16 5-16 7-16 \$ 100 d \$5.50
\$7.60 6-30 4-45 3-80 3-65 3-50 3-40 3-30
Less than cask lots, add 10% @ 14%
German Coll. list July 12, 1892.....60 & 5 @ 60 & 10%

German Halter Chain, list July 12, 1892.....80 & 5 @ 80 & 10%

Trace, Wagon and Fancy Chains.

List revised May, 1893.....60 @ 60 & 10%
Barnes' Reinforced Sash.....60 & 10%
Barnes' Victor Sash.....65%
Covert Halter.....60 & 5¢
Covert Heel Chain.....60 & 5¢
Covert Traces.....85 & 5¢
Eureka Weldless Coll.....65 @ 70%
Eureka Weldless Trace.....65 @ 70

Chalk Lines—See Lines.
Checks, Door—
 Bardley's.....20%
 Unity.....50%
Chisels
Socket Framing and Firmer
 Ohio Tool Co.....75¢100¢80%
 P. S. & W.....
 Witherby.....30%
 Buck Bros.....30%
 Charles Buck.....30%
 Doulas.....75¢75¢100%
 Merrill.....60¢100¢60¢100%
 L. & J. White.....30¢30¢5%
Tanged and Miscellaneous
 Buck Bros.....30%
 Charles Buck.....30%
 Butcher's.....\$4.75@5.00 to 2
 Spear & Jackson.....\$5 to 2
 Tanged Firmer.....50¢60¢100%
 L. & J. White, Tanged.....25¢5%
 Cold Chisels, fair quality, # 14@16%
Chucks
 Beach Pat.....each, \$3.00, 30¢30¢20%
 Danbury.....each, \$3.00, 30¢30¢20%
 Graham Patent.....35¢4%
 Morse's Adjustable, each, \$7.00, 20¢20%
 Syracuse, Bais Pat.....25%
 Skinner Patent Chucks.....40%
 Combination Lathe Chucks.....25%
 Independent Lathe Chucks.....40%
 Planer Chucks.....20%
 Universal Lathe Chucks.....40%
 Union Mfg. Co.....40%
 Combination.....40%
 Independent.....40%
 Universal.....40%
 Victor.....\$5.50, 25%
Churns
 McDermald Star Barrel Churn, each 6 gal., \$2.60; 10 gal., \$2.75; 15 gal., \$3.00; 20 gal., \$3.25.
 Timm Union, each, 5 gal., \$3.25; 7 gal., \$3.75; 10 gal., \$4.25.
Clamps
 Adjustable, Cincinnati.....15¢10%
 Adjustable, Cincinnati.....15¢10%
 Adjustable, Cincinnati.....15¢10%
 Barnes' Machinists' Clamps.....35¢4%
 Cabinet, Sargent's.....70¢10%
 Carpenter's, Cincinnati.....25¢10%
 Carriage Makers', P. S. & W. Co., 40¢10%
 Carriage Makers', Sargent's.....75¢75%
 Elberhard Mfg. Co., 40¢60¢40%
 Farmers' Clamps, Tatum's.....25¢10%
 R. L. Tool Co.'s Wrought Iron.....25%
 Saw Clamps, see Vises, Saw Filers
 Stearns' Malleable, with Wrought Iron Screw.....75¢75%
 Warners'.....40¢100¢40¢100%
Clawers, Butche
 Beatty's.....40¢40%
 Bradley's.....25¢30%
 Foster Bros.....30%
 New Haven Edge Tool Co.'s.....40%
 Nichols Bros.....30%
 P. S. & W.....35¢40%
 Schmitz, Lohoff & Co.....40¢40%
 L. & J. White.....25%
Clips
 Baker Axle Clips.....25%
 Norway, Axle.....65¢100%
 Norway Spring Bar Clips.....65¢65%
 2d grade Norway Axle.....70%
 Steel Felloe Clips.....# 4, 4%
 Superior Axle.....# 4, 4%
 Wrought Iron Felloe Clip.....# 4, 4%
Cloth and Netting, Wire
 —See Wire, etc.
Cockeyes
Cocks Brass
 Hardware list (Globe, Kerosene, Lever Bibbs, Racking, etc.).....60¢20¢100%
Coffee Mills—See Mills, Coffee.
Collars Dog
 Brass, Pope & Stevens' list.....40%
 Chapman Mfg. Company, new list.....40%
 Embossed Gilt, Pope & Stevens' list.....50%
 Leather, Pope & Stevens' list.....40%
 Medford Fancy Goods Co.....40¢100%
Combs Curry
 American Curry Comb Co.....35¢40%
 Fitch's.....60¢100%60¢100%
 Gibb's Magnetic.....# doz., \$2.00
 Kohler's Humane.....# doz., \$1.75
 Kohler's Magic, Cincinnati.....# doz., \$2.00
 Rubber, per doz., \$10.00.....25%
Compasses, Dividers & C
 Compasses, Calipers, Dividers, 70¢100%75%
 Bemis & Call Co.'s
 Dividers.....65%
 Calipers, Call's Patent Inside.....65%
 Calipers, Double.....65%
 Calipers, Inside or Outside.....65%
 Calipers, Wing.....60%
 Compasses.....60¢5%
 Excelsior.....60%
 Starrett's
 Combination Dividers.....25%
 Lock Calipers and Dividers.....25%
 Spring Calipers and Dividers.....25%
 Stevens & Co.'s.....25¢10%
Coolers, Water
 B. S. & Co.: 2-gal., \$3.40; 3-gal., \$4.00; 4-gal., \$4.50; 6-gal., \$5.60 each.....60%
Coopers' Tools
 —See Tools, Coopers'.
Cord Sash
 Braided, Crown Drab and Fancy, # 1, 55¢.....30%
 Braided, Crown White, # 1, 50¢.....50%
 Cable Laid Italian Sash.....# 1, 100%
 Common.....# 1, 80¢40%
 Common Russia Sash.....# 1, 12¢10%
 Egyptian, India Hemp, Braided.....28%
 India Cable Laid Sash.....# 1, 11¢12%
 Massachusetts, White.....22¢24%
 Ossawa Mills
 Crown, Solid Braided White, # 1, 22¢.....22%
 Crown, Drab and Fancy.....# 1, 24%
 Braided, Giant, Drab and Fancy, # 1, 30%
 Braided, Giant, White.....# 1, 20%
 Patent, good quality.....# 1, 10¢11%
 Patent Russia Sash.....# 1, 13¢14%
 Samson
 Braided, Drab Cotton.....# 1, 42%
 Braided, Italian Hemp.....# 1, 42%
 Braided, Linen.....# 1, 56%
 Braided, White Cotton.....# 1, 37%
 Semper Idem, Braided, White.....28%
 Silver Lake
 A quality, Drab, 55¢.....25%
 A quality, White, 50¢.....25%
 B quality, Drab, 35¢.....10%
 B quality, White, 30%.....10%
 Sylvan Spring, Extra Braided, Drab, 38¢
 Sylvan Spring, Extra Braided, White, 34¢
 Tait's Solid Braided.....# 1, 27%
 Wavy, Drab.....# 1, 27%

Conomy, White.....# 1, 22¢
Herules, Drab.....# 1, 30%
Herules, White.....# 1, 25%
White Cotton Braided, fair.....# 1, 28¢24%
Wire Picture
 Braided or Twisted.....50¢100%80%20%
Corkscrews—See Screws, Cork.
Corn Knives and Cutters
 —See Knives, Corn.
Crackers, Nut
 Acme.....
 Japaned, # gro., \$30.....50%
 Nickel Plated, # gro., \$30.....10%
 Table (H. & B. Mfg. Co.).....40%
 Turner & Seymour Mfg. Co.....50%
Cradles
 Grain.....50¢20¢50¢50%
Crayons
 White Crayons, # gross.....60¢6%
 Cases, 100 gr., \$3.75@4.25, at factory.
 D. M. Steward Mfg. Co. # 1
 Metal Workers' # 1, gross, \$2.50, 20¢25%
 Railroad, # gross.....2.00, 20¢25%
 Rolling Mill, # gross.....2.50, 20¢25%
 Soapstone Pencils, # gross, 1.50, 20¢25%
 See also Chalk.
Creamery Pails—See Pails, Creamery.
Crow Bars—See Bars, Crow.
Curry Combs
 —See Combs, Curry.
Cutters
Meat
 American.....30%
 No. 1.....4 B 5
 Each.....\$5 \$7 \$18 \$25 \$50 \$80
 Enterprise.....25%
 Nos.....10 12 22 32 42
 Each.....\$3 \$2.50 \$4 \$6 \$15
 Dixon's, # doz.....40¢40%
 Nos.....\$14.00 \$17.00 \$18.00 \$30.00
 Draw Cut, each:
 Nos. 5 2 6 8
 \$50 \$75 \$80 \$225.....20¢25%
 Hale's, # doz.....70¢70%
 Nos.....11 12
 \$27.00 \$33.00.....45%
 Home No. 1, # doz., \$28.00.....55¢10%
 Little Giant, # doz.....40¢100%
 Nos. 305 310 312 320 322
 \$35.00 \$48.00 \$44.00 \$72.00 \$68.00
 Miles' Challenge, # doz.....45¢45%
 Nos.....\$22.00 \$30.00 \$40.00
 Triumph No. 505, # doz., \$21.00, 25¢30%
 Woodruff's, # doz.....40¢40%
 Nos.....100 150
 \$15.00 \$18.00
 Chadborn's Smoked Beef Cutter, # doz.....\$66.00
 Enterprise Beef Shavers.....30%
Slaw and Kraut
 Tucker & Dorsey Mfg. Co.:
 Kraut Cutters.....40%
 Slaw Cutters, 1 Knife, # gross.....\$21.00
 Slaw Cutters, 2 Knife, # gross.....30.00
Tobacco
 Acme.....# doz., \$20.00, 40%
 All Iron.....# doz., \$10.00, 50%
 Champion.....20¢100%
 Nashua Lock Co.'s, # doz., \$18.00, 50¢55%
 National.....# doz., \$21.00, 30%
 Sargent's.....# doz., \$22.00, 60¢80%
Washer
 Appleton's.....# doz., \$14.00, 60¢100%
 Bonney's.....# doz., \$10.00, 50¢100%
 Cincinnati.....25¢10%
 Johnson's.....# doz., \$11.00, 35¢4%
 Penny's, # doz., Pol. \$14; Jap'd, \$16, 55%
 Smith's Pat.....# doz., \$12.00, 20¢100%
Diggers, Post Hole, &c.
 Cronk's Post Bars, # doz., \$30.00, 50¢50%
 Eureka Diggers.....# doz., \$10.00, 50¢100%
 Fletcher Post Hole Augers, # doz., \$36.00, 20¢100%
 Gem, Improved # doz., \$9.00@10.00 net
 Gibbs' Columbia.....# doz., \$12.00
 Gibbs' Hustler.....# doz., \$10.00
 Gibbs' Imperial.....# doz., \$7.50
 Gibbs' National.....# doz., \$12.00
 Gibbs' Post Hole Digger.....# doz., \$12.75
 Kohler's Hercules.....# doz., \$14.00
 Kohler's Invincible.....# doz., \$12.00
 Kohler's Little Giant.....# doz., \$18.00
 Kohler's New Champion.....# doz., \$8.00
 Ryan's.....# doz., \$20.00, 10%
 Samson, # doz., \$34.00.....25¢25%
 Scafield.....# doz., \$18.00
 Shimer's Hollow Handle.....# doz., \$24.00, 50%
 Vaughan's Post Hole Auger, # doz., \$8.50@9.50
Dividers—See Compasses.
Dog Collars—See Collars, Dog.
Door Checks
 —See Checks, Door.
Door Springs
 —See Springs, Door.
Drawers, Money
 Money Drawers, # doz.....\$18@20
 Waddell's Improved, No. 1, # doz., \$15.00
 Waddell's Improved, No. 2, # doz., \$18.00
 Waddell's Comb, Cutlery Case and Adam Till.....\$12.50
Drawing Knives
 —See Knives, Drawing.
Drills and Drill Stocks
 Automatic Boring Tools.....\$1.75@1.85
 Bench Drills, Stearns'.....50%
 Blacksmiths'.....each \$1.75
 Blacksmiths' Self-Feeding, each \$7.50, 20%
 Breast, Bartholomew's.....each \$2.50
 Breast, Millers Falls.....each \$3.00, 25%
 Breast, P. S. & W.....40¢10%
 Breast, Wilson's.....30¢5%
 Chicopee Automatic Drill.....20¢10%
 Goodell Automatic Drill.....40¢50%
 Ratchet, Curtis & Curtis.....30%
 Ratchet, Ingersoll's.....25%
 Ratchet, Merrill's.....25%
 Ratchet, Moore's Triple Action.....25%
 Ratchet, Parker's.....20¢20%
 Ratchet, Weston's.....20¢25%
 Ratchet, Whitney's.....20¢10%
 Whitey's Hand Drill, Plain, \$11.00, Adjustable, \$12.00.....20¢10%
Twist Drills
 Cleveland.....50¢100%
 Diamond, W. & B.....50¢100%
 Graham's Pat. Groove Shank.....50¢100%
 Morse.....50¢100%
 New Process.....50¢100%
 Standard.....50¢100%
 Syracuse (Metal list).....50¢100%

Drill Bits or Bit Stock
Drills—See Augers and Bits.
Drill Chucks—See Chucks.
Dripping Pans
 —See Pans, Dripping.
Drivers, Screw
 Allard's Spiral.....50%
 Brace Screw Drivers.....25¢10%
 Buck Bros.....30%
 Buck Bros' Screw Driver Bits.....37¢4%
 Clark's Pat.....33¢40%
 Cincinnati.....25¢10%
 Champion.....25¢10%
 Douglass Mfg. Co.....20¢20%
 Electric Spiral.....50%
 Killich's Hook and Ratchet.....40¢10%
 Fray's Hol. H. die Sets, No. 3, \$12.00, 45%
 Gay & Parsons.....35%
 Goodell's Automatic.....50¢60%
 Howard-Allard.....60%
 Jones Reversible.....40%
 Knut.....25¢10%
 No. 1.....70¢10%
 No. 2.....70¢10%
 No. 3.....60¢10%
 Nos. 4 and 00, Acme and Ideal.....60¢10%
 Kolb's Common Sense, # doz., \$6.00, 25¢10%
 Mayhew's Black Handle.....50%
 Mayhew's Monarch.....45¢10%
 P. S. & W.....70%
 Sargent & Co's
 No. 1, Forged Blade.....60¢100%
 No. 2, 40 and 60.....60¢100%
 Screw Driver Bits, Farr's, # gross, \$6.25
 Screw Driver Bits, # doz., 50¢75%
 Stanley R. & L. Co's
 No. 64, Varnished Handles.....65¢10%
 No. 86.....70¢10%
 Stearns.....25¢10%
 T. H. Williamson Wire Novelty Co.....50%
Egg Beaters—See Beaters, Egg.
Egg Poachers
 —See Poachers, Egg.
Electric Bell Sets
 —See Bells, Electric.
Emery—No. 4 to No. 54 to Flour, CF
 40 gr. 150 gr. F.F.F.
 Kegs, # doz.....44¢ 5 3 8
 1/2 kegs, # doz.....44¢ 5 3 8
 1/4 kegs, # doz.....54¢ 5 3 8
 10 lb cans, 10 6 6 5 5 5
 10 lb cans, less than 10.....10 10 8 8
Enameled and Tinned Ware—See Ware, Hollow.
Escutcheon Pins
 —See Pins, Escutcheon.
Escutcheons
 Brass Thread.....60¢80%
 Door Lock.....Same dis. as Door Locks.
 Wood.....25%
Expanded Metal
 List No. 5.
 Door Mats, Galvanized.....25%
 Fencing, Painted Sheets.....25%
 Lath, Galvanized.....10%
 Netting, Painted Sheets.....20%
 Tree Guards, Panoled.....15%
 Window Guards, Panoled.....15%
Extractors, Lemon Juice
 —See Squeezers, Lemon.
Fasteners, Blind
 Austin & Eddy, # gr. sets.....\$5.50
 Mackrell's, # doz., \$1.00.....20¢20%
 Stebbin's Genuine.....60¢100%
 Stebbin's Pattern.....80¢100%
 Stebbin's Tinned Ends.....40¢10%
 Weid's.....20¢10%
Faucets
 B. & L. B. Co.
 West's Lock, Open and Shut Key.....50%
 Burnside's Red Cedar.....50%
 Burnside's Red Cedar, bbl. lot.....50%
 Cast Lined.....70¢50%
 Fenn's.....40%
 Fenn's Cork Stops.....35%
 Fray's Pat. Petroleum.....60%
 Metallic Key, Leather Lined.....60¢10%
 National Measuring, # doz., \$36.00, 25¢10%
 John Summers' Peerless Best Block Tin Key.....40%
 IXL, 1st quality, Cork Lined.....50%
 Diamond Lock.....40%
 Perfection, Fla. Red Cedar (in boxes) 40%
 Boss Metallic Key.....50%
 Reliable Cork Lined.....60%
 O. K. Western Pattern Cor. Line.....50%
 No Brand, Red Cedar (in bbls.).....50¢10%
 Western Pattern Metal Key.....40%
 No Brand Metal Key.....60%
 Self Measuring
 Enterprise, # doz., \$36.00.....25¢10%
 Lane's # doz., \$36.00.....25¢10%
 Star.....75¢75%
 Lockport, Metal Plug, reduced list.....60%
Felroe Plates
 —See Plates, Felroe.
Fibre Ware—See Ware, Fibre.
Fifth Wheels
 Brewster.....50¢5%
 Derby and Cincinnati.....45¢5%
Files—Domestic
 American.....70¢70%
 Arcade.....60¢100%
 G. & H. Barnett (Black Diamond).....60¢100%
 Eagle.....60¢100%
 Nicholson Files, Rasps, &c. 60¢100%
 Nicholson (X.F.) Files.....25%
 Nicholson's Royal Files (Seconds).....75%
 (extra prices on certain sizes)
 Other makers, best brands.....70¢100%
 Fair Bros.....75¢75%
 Second quality.....80¢80%
 Arcade Horse Rasps.....50¢100%
 Chelsea Horse Rasps, Hand Cut.....50¢100%
 Heller's Horse Rasps.....60¢100%
 McCaffrey's Horse Rasps 60¢100%
 Trojan Horse Rasps.....60¢100%
Imported
 Butcher.....Butcher's list, 20%
 Ruben.....Butcher's list, 20%

Fixtures Grindston
 Moore's.....55¢10%
 P. S. & W. Co.....50¢100%
 Reading Hardware Co. 30¢100%
 Sargent's Patent.....70¢100%
Fluting Machines
 —See Machines, Fluting.
Fodder Squeezers
 —See Squeezers, Fodder.
Forks
 Hay, Manure, &c. Asso. List, 70¢70%
 Hay, Manure, &c. Phila. List, 60¢60%
 Plated, see Spoons.
Frames—Saw
 Red, Polished and Varnished...# doz.
 White Vermont.....# gro., \$9.00, 10.00
Screen, Window and Door
 Bonanza Window Screens.....50¢10%
 Corland.....40¢40%
 Empire Fancy Screen Doors, &c.....\$11
 Phillips' Window Screen Frames.....50¢100%
 Porter's Pat. Window and Door Frame.....35¢40%
 Stearns' Frames and Corners.....25¢25%
 Wash Adjustable Window Screen.....40%
 Warner's Screen Corner Irons.....35¢40%
Freezers, Ice Cream
 American.....60%
 Arctic.....70%
 Blizzard.....70%
 Boss and Pat.....60¢100%
 Buffalo Champion.....65%
 Confectioners' Machine.....50%
 Crown.....60%
 Double Action Crown.....60%
 Gem.....65%
 Giant.....60%
 Good Luck.....60%
 Granite State.....60%
 Keystone, P. D. & Co., each, \$1.50, 20%
 Model.....60%
 Ohio.....60%
 Peerless.....60%
 Shepard's Lightning.....65%
 Standard.....60%
 Standard Double Action.....60%
 Star.....60%
 White Mountain.....60%
 Zero.....70%
Fruit and Jelly Presses
 —See Presses, Fruit and Jelly.
Fruit Pickers
 —See Pickers, Fruit.
Fry Pans—See Pans, Fry.
Funnels
 Gerdorf's Perfection, Standard and Globe, 7 1/2, 1 gro., 10¢; 2 to 5 gro., 20¢; 5 to 10 gro., 30¢; 10 to 20 gro., 40¢; 20 to 30 gro., 50¢; 30 to 40 gro., 60¢; 40 to 50 gro., 70¢; 50 to 60 gro., 80¢; 60 to 70 gro., 90¢; 70 to 80 gro., 1.00; 80 to 90 gro., 1.10; 90 to 100 gro., 1.20; 100 to 120 gro., 1.30; 120 to 150 gro., 1.40; 150 to 200 gro., 1.50; 200 to 250 gro., 1.60; 250 to 300 gro., 1.70; 300 to 350 gro., 1.80; 350 to 400 gro., 1.90; 400 to 450 gro., 2.00; 450 to 500 gro., 2.10; 500 to 550 gro., 2.20; 550 to 600 gro., 2.30; 600 to 650 gro., 2.40; 650 to 700 gro., 2.50; 700 to 750 gro., 2.60; 750 to 800 gro., 2.70; 800 to 850 gro., 2.80; 850 to 900 gro., 2.90; 900 to 950 gro., 3.00; 950 to 1000 gro., 3.10; 1000 to 1100 gro., 3.20; 1100 to 1200 gro., 3.30; 1200 to 1300 gro., 3.40; 1300 to 1400 gro., 3.50; 1400 to 1500 gro., 3.60; 1500 to 1600 gro., 3.70; 1600 to 1700 gro., 3.80; 1700 to 1800 gro., 3.90; 1800 to 1900 gro., 4.00; 1900 to 2000 gro., 4.10; 2000 to 2100 gro., 4.20; 2100 to 2200 gro., 4.30; 2200 to 2300 gro., 4.40; 2300 to 2400 gro., 4.50; 2400 to 2500 gro., 4.60; 2500 to 2600 gro., 4.70; 2600 to 2700 gro., 4.80; 2700 to 2800 gro., 4.90; 2800 to 2900 gro., 5.00; 2900 to 3000 gro., 5.10; 3000 to 3100 gro., 5.20; 3100 to 3200 gro., 5.30; 3200 to 3300 gro., 5.40; 3300 to 3400 gro., 5.50; 3400 to 3500 gro., 5.60; 3500 to 3600 gro., 5.70; 3600 to 3700 gro., 5.80; 3700 to 3800 gro., 5.90; 3800 to 3900 gro., 6.00; 3900 to 4000 gro., 6.10; 4000 to 4100 gro., 6.20; 4100 to 4200 gro., 6.30; 4200 to 4300 gro., 6.40; 4300 to 4400 gro., 6.50; 4400 to 4500 gro., 6.60; 4500 to 4600 gro., 6.70; 4600 to 4700 gro., 6.80; 4700 to 4800 gro., 6.90; 4800 to 4900 gro., 7.00; 4900 to 5000 gro., 7.10; 5000 to 5100 gro., 7.20; 5100 to 5200 gro., 7.30; 5200 to 5300 gro., 7.40; 5300 to 5400 gro., 7.50; 5400 to 5500 gro., 7.60; 5500 to 5600 gro., 7.70; 5600 to 5700 gro., 7.80; 5700 to 5800 gro., 7.90; 5800 to 5900 gro., 8.00; 5900 to 6000 gro., 8.10; 6000 to 6100 gro., 8.20; 6100 to 6200 gro., 8.30; 6200 to 6300 gro., 8.40; 6300 to 6400 gro., 8.50; 6400 to 6500 gro., 8.60; 6500 to 6600 gro., 8.70; 6600 to 6700 gro., 8.80; 6700 to 6800 gro., 8.90; 6800 to 6900 gro., 9.00; 6900 to 7000 gro., 9.10; 7000 to 7100 gro., 9.20; 7100 to 7200 gro., 9.30; 7200 to 7300 gro., 9.40; 7300 to 7400 gro., 9.50; 7400 to 7500 gro., 9.60; 7500 to 7600 gro., 9.70; 7600 to 7700 gro., 9.80; 7700 to 7800 gro., 9.90; 7800 to 7900 gro., 10.00; 7900 to 8000 gro., 10.10; 8000 to 8100 gro., 10.20; 8100 to 8200 gro., 10.30; 8200 to 8300 gro., 10.40; 8300 to 8400 gro., 10.50; 8400 to 8500 gro., 10.60; 8500 to 8600 gro., 10.70; 8600 to 8700 gro., 10.80; 8700 to 8800 gro., 10.90; 8800 to 8900 gro., 11.00; 8900 to 9000 gro., 11.10; 9000 to 9100 gro., 11.20; 9100 to 9200 gro., 11.30; 9200 to 9300 gro., 11.40; 9300 to 9400 gro., 11.50; 9400 to 9500 gro., 11.60; 9500 to 9600 gro., 11.70; 9600 to 9700 gro., 11.80; 9700 to 9800 gro., 11.90; 9800 to 9900 gro., 12.00; 9900 to 10000 gro., 12.10; 10000 to 10100 gro., 12.20; 10100 to 10200 gro., 12.30; 10200 to 10300 gro., 12.40; 10300 to 10400 gro., 12.50; 10400 to 10500 gro., 12.60; 10500 to 10600 gro., 12.70; 10600 to 10700 gro., 12.80; 10700 to 10800 gro., 12.90; 10800 to 10900 gro., 13.00; 10900 to 11000 gro., 13.10; 11000 to 11100 gro., 13.20; 11100 to 11200 gro., 13.30; 11200 to 11300 gro., 13.40; 11300 to 11400 gro., 13.50; 11400 to 11500 gro., 13.60; 11500 to 11600 gro., 13.70; 11600 to 11700 gro., 13.80; 11700 to 11800 gro., 13.90; 11800 to 11900 gro., 14.00; 11900 to 12000 gro., 14.10; 12000 to 12100 gro., 14.20; 12100 to 12200 gro., 14.30; 12200 to 12300 gro., 14.40; 12300 to 12400 gro., 14.50; 12400 to 12500 gro., 14.60; 12500 to 12600 gro., 14.70; 12600 to 12700 gro., 14.80; 12700 to 12800 gro., 14.90; 12800 to 12900 gro., 15.00; 12900 to 13000 gro., 15.10; 13000 to 13100 gro., 15.20; 13100 to 13200 gro., 15.30; 13200 to 13300 gro., 15.40; 13300 to 13400 gro., 15.50; 13400 to 13500 gro., 15.60; 13500 to 13600 gro., 15.70; 13600 to 13700 gro., 15.80; 13700 to 13800 gro., 15.90; 13800 to 13900 gro., 16.00; 13900 to 14000 gro., 16.10; 14000 to 14100 gro., 16.20; 14100 to 14200 gro., 16.30; 14200 to 14300 gro., 16.40; 14300 to 14400 gro., 16.50; 14400 to 14500 gro., 16.60; 14500 to 14600 gro., 16.70; 14600 to 14700 gro., 16.80; 14700 to 14800 gro., 16.90; 14800 to 14900 gro., 17.00; 14900 to 15000 gro., 17.10; 15000 to 15100 gro., 17.20; 15100 to 15200 gro., 17.30; 15200 to 15300 gro., 17.40; 15300 to 15400 gro., 17.50; 15400 to 15500 gro., 17.60; 15500 to 15600 gro., 17.70; 15600 to 15700 gro., 17.80; 15700 to 15800 gro., 17.90; 15800 to 15900 gro., 18.00; 15900 to 16000 gro., 18.10; 16000 to 16100 gro., 18.20; 16100 to 16200 gro., 18.30; 16200 to 16300 gro., 18.40; 16300 to 16400 gro., 18.50; 16400 to 16500 gro., 18.60; 16500 to 16600 gro., 18.70; 16600 to 16700 gro., 18.80; 16700 to 16800 gro., 18.90; 16800 to 16900 gro., 19.00; 16900 to 17000 gro., 19.10; 17000 to 17100 gro., 19.20; 17100 to 17200 gro., 19.30; 17200 to 17300 gro., 19.40; 17300 to 17400 gro., 19.50; 17400 to 17500 gro., 19.60; 17500 to 17600 gro., 19.70; 17600 to 17700 gro., 19.80; 17700 to 17800 gro., 19.90; 17800 to 17900 gro., 20.00; 17900 to 18000 gro., 20.10; 18000 to 18100 gro., 20.20; 18100 to 18200 gro., 20.30; 18200 to 18300 gro., 20.40; 18300 to 18400 gro., 20.50; 18400 to 18500 gro., 20.60; 18500 to 18600 gro., 20.70; 18600 to 18700 gro., 20.80; 18700 to 18800 gro., 20.90; 18800 to 18900 gro., 21.00; 18900 to 19000 gro., 21.10; 19000 to 19100 gro., 21.20; 19100 to 19200 gro., 21.30; 19200 to 19300 gro., 21.40; 19300 to 19400 gro., 21.50; 19400 to 19500 gro., 21.60; 19500 to 19600 gro., 21.70; 19600 to 19700 gro., 21.80; 19700 to 19800 gro., 21.90; 19800 to 19900 gro., 22.00; 19900 to

Halters—

Cover's Adj. Rope Halters.....	40&25
Cover's Adj. W. O. Halters.....	35&55&25
Cover's Hemp Horse and Cattle Tie.....	50&10&25
Cover's Jute Cattle Ties.....	70&10&25
Cover's Jute Horse Ties.....	70&25
Cover's Rope, 7-16 in., Jute.....	70&25
Cover's Rope, 1/2 in., Hemp.....	50&25
Cover's Rope, Jute.....	60&10&25
Cover's Saddlery Works Halters.....	35&15
Cover's Saddlery Works Handy Web Halters.....	35&15
Cover's Saddlery Works Horse and Cattle Ties.....	35&15

Hammers—**Handled Hammers—**

Atha Tool Co.....	50&10&60
Buffalo Hammer Co.....	50&10&60
Humason & Beckley.....	50&10&60
Verree.....	50&10&60
Cheney's Claw.....	40&10
Cheney's Machinist's & Riveting.....	40&10
C. Hammond & Son.....	40&10
Magistie Tack, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	40&10

Heavy Hammers and Sledges—

3 lb and under.....	80&80&10
5 to 10 lb.....	80&80&10
Over 10 lb.....	80&80&10
Wilkinson's Smiths.....	10&10&10

Handcuffs and Leg Irons—**See Police Goods.****Handles—****Cross-Cut Saw Handles—**

Atkins.....	40
Champion.....	15
Ely's Perfection.....	15
Sensible # doz. Pr.....	50.00, 60&50&10

Iron, Wrought or Cast—

Barn Door, # doz.....	1.40
Bronze Iron Latches.....	50
Chest, Sargent's list.....	50&10&50&10&10
Door or Thump.....	50
Nos.....	1 2 3 4
Per doz.....	0.90 1.00 1.08 1.35 1.50

Jap'd Store Door Handles—

Plate, #1.10 plate, #0.85.....	10
Roggin's Latches.....	25&25&30

Wood—

Anger, assorted.....	50
Anger, large.....	50
File, assorted.....	50
Brad Axl.....	50
Apple Firmer Chisel, ass'd.....	50
Apple Firmer Chisel, large.....	50
Hickory Firmer Chisel, ass'd.....	50
Hickory Firmer Chisel, large.....	50
Socket Firmer Chisel, ass'd.....	50
Socket Firmer Chisel, large.....	50
Socket Framing Chisel, ass'd.....	50
Chisel, Fibre Head.....	35
Hammer, Hatchet, Axe, &c.....	40&40&25
Hoe, Rake, Shovel, &c.....	50&50&25
Pat. Auger, Douglass.....	50
Pat. Auger, Ives.....	50
Pat. Auger, Swan's.....	50
Saw and Plane.....	40&10&50
J. B. Smith & Co's Pat. File.....	50

Hangers—

Barn Door, New England.....	70&70&5
Barn Door, old patterns.....	70&70&5
Barry.....	50
Best Anti-Friction.....	60&10&60&10&5
Boss.....	60&10&60&10&5
Carrier Steel Anti-Friction.....	60&10
Champion.....	60&10
Chicago Anti-Friction.....	60&10
Climax Anti-Friction.....	55
Cincinnati Nos. 1, 2, 25; 3, 2, 50; 4, 2, 50.....	60&10&10
Crescent.....	60&10&10
Cronk's Patent, Steel Covered.....	60&10
Duplex (Wood Track).....	60&10&5
Economy, \$6.00.....	60&10
Hamilton Wrought Steel Track.....	55
Interstate.....	60&10&60
Kidder's.....	60&10&10
Lane's New Standard.....	60&10&5
Lane's Parlor.....	60&10&5
Lane's Standard.....	60&10&5
Lundy, Steel Parlor.....	40
Magie.....	45&10
Matchless.....	60&10
Moody.....	45
Moore's Baggage Car Door.....	35&45
Moore's Elevator.....	35&45
Moore's Railroad.....	55
Nickel, Steel, Nos. 0, 25; 1, 20; 2, 15; 3, 10; 4, 5.....	40&10&50
Orleans Steel.....	55
Paragon Nos. 5, 5, 7 and 8.....	20&10
Pendulum, Payson's.....	40&40&10
Perfection.....	60&10&10&5
Richards.....	60&10&10
Samson Steel Anti-Friction.....	55
Star.....	40&10&40&10&5
Stearns' Anti-Friction.....	20&10&10
Stearns' Challenge.....	25&10&10
Sterling.....	60&10&60
Terry's Ideal.....	60&10&10&5
Terry's Mower.....	60&10&10&5
Terry's Shield.....	60&10&60
Terry's Solid.....	60&10&60
Terry's Wrought Single Strap.....	60&10
Victor, No. 1, 15.00; No. 2, 16.50; No. 3, 18.00.....	20&10&10
Warner's Pat.....	20&10&10
Wild West.....	45&10
Zenith for Wood Track.....	55

Hatchets—

American Axe and Tool Co.....	40 & 10
Bunt's.....	50
Hurd's.....	50
Mann's.....	50
Underhill's.....	50
O. Hammond & Son.....	50
Fayette R. Plumb.....	10
Collins.....	50 @ 50
Buffalo Hammer Co.....	50 @ 50
Kelly's.....	50 @ 50
P. B. & W. Co.....	50 @ 50
Sargent & Co.....	50 @ 50
Chulte, Lohr & Co.....	50 @ 50
Ten Eyck Edge Tool Co.....	50 @ 50

Hay and Straw Knives**See Knives.****Hinges—****Blind Hinges—**

Pat. Auger, Ives.....	30&10%
Pat. Auger, Swan's.....	7 set \$1.00
Saw and Plane.....	40&10@50%
J. B. Smith & Co.'s Pat. File.....	50%

Pullers Nail—
 Rollers.....\$ doz., \$24.00, 40%
 Economy.....\$ doz., \$5.50 to \$6.00
 Ellrich.....\$ doz., \$10.00
 Giant, No. 1.....\$ doz., \$18.00, 10% to 15%
 Giant, No. 2.....\$ doz., \$18.00, 10% to 15%
 Pelican.....\$ doz., \$30.00, 25% to 30%
 Scranton.....\$ doz., \$18.00, 35% to 40% to 45%

Pulleys—
 Brass Screw.....70%
 Hay Fork, "Anti-Friction," 5 in. solid.....50%
 Hay Fork, "F" Common and Patent.....50%
 Hay Fork, Moore's Anti-Friction 5 in. Wheel.....20%
 Hay Fork, Reed's Self-Lubricating.....40%
 Hay Fork, Solid Eye.....50%
 Hay Fork, Solid Eye.....50%
 Hay Fork, Stearns' Nos. 35 & 45.....50% to 10%
 Hay Fork, Stearns' Nos. 15, 25, 35, 45, 60, 80.....20%
 Hay Fork, Tarbox Pat. Iron.....20%
 Hot House, Awning, &c.....60% to 70%
 Japanese Clothes Line.....60% to 10% to 15%
 Japanese Screw.....70% to 10% to 15%
 Japanese Steel.....70% to 10% to 15%
 Moore's Ceiling or End, Anti-Friction.....40%
 Moore's Dumb Water, Anti-Friction.....50%
 Moore's Electric Light.....35%
 Moore's Side, Anti-Friction.....50%
 Cash (Auger Mortise).....60%
 Common Sense.....60%
 Empire.....60%
 Acme.....60%
 Ideal, Nos. 2, 4, 10 & 16.....60% less 1¢
 Star.....60%
 Ideal, or IXL No. 60.....\$ doz. 22¢ net.
 On bbl. lots extra 5%
 Rhade Rack.....45%
 Shepard's Niagara, No. 25.....\$ doz 25¢ net.
 Tackle Blocks—See Blocks.

Pumps—
 Clister, Best Makers.....60% to 10% to 15%
 Pitcher Spout, Best Makers.....70% to 10% to 15%
 Pitcher Spout, Cheaper G'ds.....75% to 10% to 15%
 Myers' Pumps, low list.....60%

Punches—
 Avery's Revolving.....40%
 Avery's Sawset and Punch—See Sawsets
 Bemis & Call Co.'s Cast Steel Drive.....50% to 5%
 Bemis & Call Co.'s Check.....50%
 Bemis & Call Co.'s Spring.....50% to 5%
 Bemis & Call Co.'s Springfield Socket.....65%
 Niagara Hollow Punches.....20% to 25%
 Niagara Solid Punches.....55%
 Rice Hand Punches.....15%
 Saddler's or Drive, good.....\$ doz., 60¢ to 65¢
 Spring, good quality.....\$ doz., \$2.50 to \$3.00
 Spring, Leach's Pat.....\$ doz., 15¢
 Solid Timmers, P., S. & W. Co., \$ doz., 14¢
 Timmers' Hollow Punches, P., S. & W. Co.....20% to 25%

Rail—
 Barn Door, Light, In. 1/4 1/2 3/4
 Per 100 feet.....\$1.75 2.10 2.75
 B.D. for N. E. Hangers—
 Small, Med. Large.
 Per 100 feet.....\$2.00 2.50 3.00 Net
 Carrier, double braced, Steel Rail, foot.....34¢
 Lundy Parlor Door, Planed Edge, 8 ft. 7 1/2
 Moody Steel Rail 8 ft. 5 1/2.....45¢ to 55¢
 Moore's Steel Rail.....35%
 Sliding Door, Bronzed Wt Iron, 8 ft. 6 1/2
 Sliding Door, Iron, Painted.....35%
 Sliding Door, Wt Brass, 8 ft. 6 1/2, 40% to 45%
 Terry's Steel Rail 7 1/2 foot.....\$ doz. 14¢
 Victor Track Rail 7 1/2 foot.....\$ doz. 14¢

Rakes—
 Cast Steel, Association & Co., 70% to 10% to 15%
 Cast Steel, outside g'ds.....70% to 10% to 15%
 Malleable, good.....70% to 10% to 15%
 Malleable, low grade.....75%
 Fort Madison Prize Bow Brace and Peerless.....65%
 Fort Madison Steel Tooth Lawn Rake.....\$ doz. 35¢
 Gibbs.....\$ doz., \$4.00
 Gibbs' Acme Lawn Rake.....\$ doz., \$4.75
 Gibbs' Canton Lawn Rake.....\$ doz., \$3.75
 Gibbs' Crown Lawn Rake, No. 1.....\$ doz., \$4.90; No. 2, \$5.30
 Gibbs' Favorite Lawn Rake.....\$ doz., \$3.90
 Gibbs' Hustler No. 1.....\$ doz., \$4.25
 Gibbs' Hustler No. 1.....\$ doz., \$4.40
 Onida Lawn Rake.....\$ doz., \$4.00

Razors—
 Campbell Cutlery Co.....50%
 Electric Cutlery Co.....Net prices
 Galvanic.....\$ doz., \$15.00
 Jordan's AAAI, new list.....Net prices
 Jordan's Old Faithful, new list, Net prices
 J. R. Torrey Razor Co.....Net prices
 Wostenholm and Butcher, \$10 to 20.....10%

Razor Straps—
 See Straps, Razor.

Reels—
 Clothes Line—
 Stearns.....\$ doz., 33¢ to 10%

Fishing—
 Hendryx Aluminum, German Silver, Gold, Bronze, Silver, Rubber, Poplar and Salmon, Single Action, Multiplying and Quadruple, all sizes.....25%
 Hendryx Single Action Series, 102P and PN, 202P and PN, 102PR and PN, 202PR and PN, 504P and PN, 00804P and PN, 502 and 502N, 02084N, Competitor.....50%
 Hendryx Multiplying and Quadruple Series, 3004N and PN, 4N and PN, 2004N, 2004P and PN, 002904PN, 0924 and 0924N, 5009N and PN.....40% to 10%

Registers—
 Moore's Bronze Finishes.....70%
 Moore's Electroplated.....75%
 Moore's Japanned.....75%
 Moore's Solid Bronze.....65%
 Moore's Stove Pipe.....35%

Rings and Ringers—
 Bull Rings—
 Hotchkiss' low list.....40%
 Humason, Beckley & Co.'s.....75%
 Peck, Stow & W. Co.'s.....60% to 10% to 15%
 Rargent's.....80% to 10% to 15%

Hog Rings and Ringers—
 Note.—The market for Hog Rings and Ringers is in a demoralized condition and prices are low and irregular. We therefore withdraw quotations for the present.

Rivets and Burrs—
 Copper.....60% to 10% to 15%
 Coppered Iron, Betina Brand.....50% to 5%
 Iron Norway, list Nov. 17 '87.....65% to 10% to 15%
 Second Quality.....70% to 10% to 15%

Rivet Sets—See Sets.

Roasting and Baking Pans—See Pans, Roasting and Baking.

Reds—
 Star, Black Walnut.....\$ doz 40¢
 Star, Brass.....25¢ to 30¢

Rollers—
 Acme Moore's Anti-Friction.....55%
 Barn Door, Sargent's list.....60% to 10% to 15%
 Moore's Barn Door Stay.....50%
 Union Barn Door Roller.....70%
 Thompson Mfg. Co.'s Lawn Rollers.....50%

Rope—
 The following prices are f.o.b., New York or factory, and are shaded 1/4¢ to 1/2¢ on large lots; terms 1 1/2% for cash.
 Manila, 7-16 in. diam. and larger.....\$ 8 @ 8 1/4¢
 Manila, 1/4 in. to 5-16 in. diam.....\$ 9 @ 8 1/4¢
 Manila, Tarred Rope.....\$ 7 1/2 @ 7 3/4¢
 Manila, Hay Rope, Moist.....\$ 8 @ 8 1/4¢
 Sisal, 7-16 in. and larger.....\$ 6 @ 6 1/4¢
 Sisal, 1/4 and 5-16 in. diam.....\$ 7 @ 7 1/4¢
 Sisal, Hay Rope.....\$ 6 @ 6 1/4¢
 Sisal, Tarred Rope.....\$ 5 1/2 @ 5 3/4¢
 Sisal, Medium Lath Yarn.....\$ 5 1/2 @ 5 3/4¢
 New Zealand.....\$ 5 1/4 @ 5 1/2¢
 New Zealand, 1/4 inch.....\$ 5 1/4 @ 5 1/2¢
 New Zealand, 1/2 and 5-16 in. diam.....\$ 5 1/4 @ 5 1/2¢
 New Zealand, Hay Rope.....\$ 5 1/4 @ 5 1/2¢
 New Zealand, Tarred Rope.....\$ 4 1/2 @ 5¢
 Cotton Rope.....\$ 12 @ 15¢
 Jute Rope.....\$ 5 1/4 @ 6¢

Wire—
 List February, 1892. All kinds.....50%

Rules—
 Boxwood.....\$ doz 10¢ to 10¢ to 10¢ to 10¢
 Ivory.....50% to 10% to 15%
 Starrett's Steel Rules and Straight Edges.....25¢ to 10%

Sad Irons—See Irons, Sad.

Sand and Emery Paper and Cloth—
 See Paper and Cloth.

Sash Cord—See Cord, Sash.

Sash Locks—See Locks, Sash.

Sash Weights—
 See Weights, Sash.

Sausage Stuffers or Fillers—
 See Stuffers or Fillers, Sausage.

Saws—
 Note.—Extra 50% to 10% often given.

Atkins' Circular.....50% to 10% to 15%
 Atkins' Band.....50% to 10% to 15%
 Atkins' Cross Cut, Dry List.....40%
 Atkins' Mulay, Mill and Drag.....50% to 10% to 15%
 Atkins' One Man Saw.....40%
 Atkins' Wood Saws.....40%
 Atkins' Hand, Compass, &c.....45% to 10% to 15%
 Diston's Circular.....45% to 10% to 15%
 Diston's Cross Cut, list Jan. 1, '93, 40% to 10% to 15%
 Dineen's Hand.....25%
 C. E. Jennings & Co.'s.....25%
 Peace Circular and Mill.....45% to 10% to 15%
 Peace Cross Cuts, list Jan. 1, '93.....45% to 10% to 15%
 Peace Hand, Panel and Rip.....25% to 10% to 15%
 Richardson's Circular and Mill.....45% to 10% to 15%
 Richardson's X Cuts, list Jan. 1, '93.....45% to 10% to 15%
 Simonds' Hand, &c.....25% to 10% to 15%
 Simonds' Circular Saws.....45% to 10% to 15%
 Simonds' Crescent Ground Cross Cut Saws.....30%
 Simonds' One Man Cross Cuts.....40% to 10% to 15%
 Simonds' Gang, Mill, Mulay and Drag Saws.....45% to 10% to 15%
 Wheeler, Cross Cut, Dry List.....40%
 Cross Cuts, list Jan. 1, 1893.....45% to 10% to 15%
 Hand, Panel and Rip.....30% to 10% to 15%
 Woodrough & McParlin.....45% to 10% to 15%
 Cross Cuts, list Jan. 1, 1893.....45% to 10% to 15%
 Hand, Panel and Rip.....25% to 10% to 15%

Hack Saws—
 Eureka and Crescent.....25%
 Griffin's, complete.....40% to 10% to 15%
 Griffin's Hack Saw Blades.....40% to 10% to 15%
 Star Hack Saws and Blades.....25%

Scroll—
 Barnes' Builders' and Cab Makers'.....\$15.25 to 25%
 Barnes' Scroll Saw Blades.....35%
 Lester, complete, \$10.00.....25%
 Rogers, complete, \$4.00.....25%

Saw Frames—
 See Frames, Saw.

Saw Sets—See Sets, Saw.

Saw Tools—See Tools, Saw.

Scale Beams—
 See Beams, Scale.

Scales—
 Chatillon's Eureka.....25%
 Chatillon's Favorite.....40%
 Chatillon's Grocers' Trip Scales.....50%
 Family, Turnbills.....30% to 10% to 15%
 Hatch, Counter, No. 171, good quality.....\$ doz \$17.00 to \$18.00
 Hatch Tea, No. 161.....\$ doz \$6.00 to \$6.50
 Riehle Bros' Platform.....\$ 40 @ 40¢ to 10¢
 Union Platform Plain.....\$2.00 to \$2.10
 Union Platform, Striped.....\$2.15 to \$2.25
 Standard.....50%

Scissors, Fluting—
 45%

Scrapers—
 Adjustable Box Scraper (S. R. & L. Co.).....\$ doz. 10¢ to 10¢
 Box, 1 Handle.....\$ doz \$2.00
 Box, 2 Handle.....\$ doz \$3.00 to \$4.00
 Defence Box and Ship.....20% to 10% to 15%
 Foot.....50% to 10% to 15%
 Ship, Common.....\$ doz \$3.50
 Ship, R. I. Tool Co.....10%

Screen Window and Door Frames—See Frames.

Screw Drivers—
 See Drivers, Screw.

Screws—

Bench and Hand—
 Bench, Iron.....55¢ to 10¢ to 10¢ to 10%
 Bench, Wood, Beech.....\$ doz \$2.25
 Bench, Wood, Hickory.....25¢ to 10¢ to 10%
 Hand, Wood.....25¢ to 10¢ to 10%
 Hand, Land Rapids, list.....35%
Coach, Lag and Hand-Rail—
 Lag, Blunt Point, list Jan. 1, 1890.....50% to 10% to 15%
 Coach and Lag, Gimlet Point, list Jan. 1, 1890.....80% to 10% to 15%
 Hand Rail, Am. Screw Co.....80%
 Hand Rail, H. & B. Mfg. Co.....75¢ to 75¢ to 5¢
 Hand Rail, Sargent's.....70% to 10% to 15%

Jack Screws—
 Millers Falls.....50% to 10% to 15%
 Millers Falls, Roller.....50% to 10% to 15%
 P. S. & W.....35%
 Sargent.....70% to 10% to 15%
 Stearns.....40% to 10% to 15%

Cork—
 Detroit Cork Screw Co.....39% to 45%
 Humason & Beckley Mfg. Co.....40% to 10% to 15%
 Williamson's.....35% to 10% to 15%
 Williamson's Forged Wood, Applewood Handle, \$ doz., \$5.00; Rosewood, \$5.50.....40%

Machine—
 List August 1, 1894.

**Flat Head Iron.....45%
 Round Head Iron.....40%**

Wood—
 List January 1, 1891.
 Flat Head Iron.....85%
 Round Head Iron.....75%
 Flat Head Brass.....85%
 Round Head Brass.....75%
 Flat Head Bronze.....85%
 Round Head, Bronze.....75%
 Rogers' Drive Screws.....\$7 1/2¢

Scroll Saws—See Saws, Scroll.

Scythes—
 Grain.....40% to 10% to 15%
 Grass.....40% to 10% to 15%

Scythe Snaths—
 See Snaths, Scythe.

Sets—
 Alken's Sets, A and Tool.....\$ doz \$10.00, 60% to 60% to 5%
 Common Brad Sets.....\$ doz \$12.00, 70% to 10% to 15%
 Fray's Adj. Tool Hds., Nos. 1, 1 1/2, 2, 3, 3 1/2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 10

Snaps, Harness, &c.—
Anchor 1. & S. Mfg. Co. 60¢
Andrews 50¢
Cover's Saddlery Works' Triumph 33¢
Covered Spring 30¢
Cover 50¢
Cover, New Patent 50¢
Cover, New E. 50¢
Fitch's (Bristol) 50¢
German, new list 40¢
Hotchkiss 10¢
Kelley & Woolworth's Steel Harness 50¢
John Fritz Snaps 50¢
Sargent's Patent 70¢
70¢ & 10¢ @ 70¢ & 10¢ & 10¢

Snaths—
Sythe 50¢ & 20¢ @ 50¢ & 10¢

Soldering Irons—
See Irons, Soldering.

Spittoons, Cuspidors, &c.—
Standard Fiberglass—
Cuspidors, 5/8-inch, 1/2 doz., No. 5, 38¢; No. 5, 30¢
Spittoons, Daisy, 5-inch, No. 1, 1 10 and 11 inch, 30¢

Spoke Shaves—
See Shaves, Spoke.

Spoke Trimmers—
See Trimmers, Spoke.

Spoons and Forks—
Tinned Iron—
Basting, Cen. Stamp. Co.'s list 70¢ & 25¢
Buffalo, S. & Co. 83¢ & 25¢
Solid Table and Tea, Cen. Stamp. Co.'s list 70¢ & 25¢

Silver Plated—
4 months or 5¢ cash 30 days:
L. Boardman & Son 50¢ & 12¢
Holmes & Edwards Silver Co. 40¢ & 12¢
Meriden Silver Co., Rogers 40¢ & 12¢
Reed & Barton 40¢ & 12¢
Rogers & Bros. 40¢ & 12¢
O. Rogers & Bros. 40¢ & 12¢
Rogers & Hamilton 40¢ & 12¢
Wm. Rogers Mfg. Co. 40¢ & 12¢
Simpson, Hall, Miller & Co. 40¢ & 12¢

Miscellaneous—
Boardman's Britannia Spoons, case lots 60¢ & 25¢ cash
Boardman's Nickel Silver, list July 1, 1891 80¢ & 75¢
Britannia 80¢ & 75¢
German Silver 50¢ & 55¢
Nickel Silver 50¢ & 55¢ cash
Holmes & Edwards Silver Co.:
No. 24 German Silver 50¢ & 10¢
No. 30 Silver Metal 50¢ & 10¢
No. 49 Nickel Silver 50¢ & 10¢
No. 60 Nickel Silver 50¢ & 10¢
No. 67 Mexican Silver 50¢ & 10¢
Rogers & Bros.:
Cimeter, Flatware 40¢ & 15¢
Cimeter, Steel Goods 40¢ & 10¢
Crown Hamilton, Flatware and Cutlery 30¢
Steel Goods 40¢ & 10¢
Wm. Rogers Mfg. Co.:
15¢ Rogers' Nickel Silver 60¢ & 25¢
25¢ Rogers' Nickel Silver 60¢ & 25¢
Rogers' Silver Metal 50¢ & 10¢

Springs, Door—
Champion (Coll.) 55¢ & 10¢ @ 55¢ & 10¢
Cowell's, No. 1, 1/2 doz. 18.00; No. 2, 15.00
Gem (Coll), list April 19, 1894 50¢ & 10¢
Hercules 50¢ & 10¢
Phoenix 33¢ @ 33¢ & 70¢
Rubber, complete, 1/2 doz. 15.00; 60¢ @ 70¢
Star (Coll), list April 19, 1894 20¢ & 10¢
Torrey's Rod, 89 in., 1/2 doz. 11.20 @ 1.25
Warner's No. 1, 1/2 doz. 11.50; No. 2, 11.50
Victor (Coll) 60¢ & 10¢ @ 60¢ & 10¢

Carriage, Wagon, &c.—
Elphig, Concord, Platform and Half Scroll 80¢ & 10¢ @ 80¢ & 10¢ or net prices
Oluf's Bolster Springs 25¢

Sprinklers, Lawn—
Gibbs' Arc 1/2 doz., 12.00
Gibbs' Hustler 1/2 doz., 30.00

Squares—
Nickel-Plated 85¢ & 35¢
Steel and Iron 85¢ & 35¢
Try Square and T Bevels 60¢ & 10¢
Avery's Bevel Protractor 50¢
Avery's Flush Bevel Squares 40¢
Dutton's Try Square and T Bevels 50¢
Starrett's Micrometer Caliper Squares 25¢
Winterbottom's Try and Miter 30¢ & 10¢

Squeezers—
Fodder—
Blair's 1/2 doz. 22.00
Blair's "Olimax" 1/2 doz. 11.00

Lemon—
Porcelain Lined, No. 1 1/2 doz. 26.00

Wood, Common 1/2 doz. 17.00
Wood, No. 2 1/2 doz. 35.00
Dean's, No. 1, 1/2 doz. 35.00
1.00; Queen, 2.50
Dunlap's Improved 1/2 doz. 37.50
Hotchkiss Straight Flash 1/2 doz. 20.00
Jennings' Star 1/2 doz. 25.00
King 40¢ & 5¢
Little Giant 60¢ & 5¢
Samuels, No. 1, 5.00; No. 2, 4.99
118 1/2 doz. 28.00
The Boss 1/2 doz. 25.00

Standard Fiber Ware—
See Ware, Standard Fiber.

Staples—
Barbed Blind, 1/4 in. and larger, 1/2 doz. 7.00
Barbed Blind, 1/4 in. 1/2 doz. 8.00
Fence Staples, Galvanized, Same price
Fence Staples, Plain, Same price
Grand Crossing Tack Co.'s list 75¢ & 10¢

Steels Butchers'—
C. & A. Hoffman's 40¢
Nichols Bros. 40¢

Steelyards—
40¢ & 10¢ @ 50¢

Stocks and Dies—
Blacksmith's:
Butterfield's Goods 35¢
Waterford Goods 35¢
Gardner 50¢
Green River 50¢
Lightning Screw Plate 25¢ & 30¢
Beece's New Screw Plates 25¢ & 30¢
Reversible Ratchet 80¢

Stones—
Grind—See Grindstones.

Scythe Stones—
Pike Mfg. Co., list April, 1892 83¢
Leveau & Stone Co., list Nov 1892 83¢

Oil Stones, &c.—
Pike Mfg. Co.:
Hindustan No. 1, 1/2 doz. 35¢
Sand Stone 40¢ & 40¢
Turkey Oil Stone, 1/2 to 3 10¢
Turkish Slips 2.00
Lily White Vaseline 80¢
Rosa Red Washita 60¢
Washita Stone, Extra 50¢
Washita Stone, No. 1 40¢
Washita Stone, No. 2 30¢
Lily White Slips 80¢
Rosa Red Slips 80¢
Washita Slips, No. 1 70¢
Washita Slips, No. 1, 3 to 5 1/2 in. 82¢
Arkansas Stone, No. 15 1/2 to 5 in. 83¢
Lake Superior 1/2 doz. 13¢
Lake Superior Slips 1/2 doz. 20¢
Tanite Mills 1/2 doz. 50¢
Emery Oil 1/2 doz. 50¢ @ 65¢

Stops, Bench—
Cincinnati 25¢ & 10¢
Crescent 1/2 doz. 15.00
Hotchkiss 1/2 doz. 10.00 @ 10.00
McGills 1/2 doz. 3.00
Millers Falls 10¢
Morrill's, 1/2 doz, No. 1, 10.00; No. 2, 11.00
Stearns 40¢ & 20¢
Terrell's Nos. 1 and 2, 1/2 doz., 35¢; No. 3, 35¢
Weston's, No. 1, 10.00; No. 2, 9.25 @ 10.50

Stove Polish—
See Polish, Stove.

Stretchers, Carpet—
Cast Iron, Steel Points 1/2 doz. 75¢ & 80¢
Cast Steel, Polished 1/2 doz. 22.50
Socket 1/2 doz. 17.50
Bullard's 25¢ & 10¢ @ 40¢

Strops, Razor—
Badger's Belt and Com. 1/2 doz. 22.00
Campbell Cutlery Co. Net prices
Electric Cutlery Co. Net prices
Genuine Emerson 60¢ @ 60¢
Imitation 1/2 doz. 22.00 @ 20.00
Jordan's Pat. Padded, list Nov. 1, '89, 50¢
Lamont Combination 1/2 doz. 24.00
Torrey's Net prices

Stuffer Sausage—
Miles' Challenge, 1/2 doz. 120.00
Perry, 1/2 doz, No. 1, 15.00; No. 0, 12.00
21.00; No. 1, 50¢ @ 50¢
Draw Cut No. 4, each 30.00
Enterprise Mfg. Co., list Jan 17, '93, 25¢
Silvers 40¢ & 10¢

Sweepers, Carpet and Lawn—
Carpet—
Acme 1/2 doz. 22.00
Advance 1/2 doz. 18.00
Banner Jap'd, 1/2 doz. 22.00; Nickel, 24.00
Grand 1/2 doz. 27.00
Gold Medal 1/2 doz. 27.00
Prize 1/2 doz. 27.00
Superior 1/2 doz. 27.00
Cosmopolitan 1/2 doz. 27.00
Furniture Protector, Jap. 1/2 doz. 27.00
Furniture Protector, Nickel 1/2 doz. 27.00
Inter Ocean 1/2 doz. 27.00
Hall 1/2 doz. 27.00
Crown Jewel, No. 1, 18.00; No. 2, 19.00; No. 3, 20.00
Domestic 1/2 doz. 22.00
Easy Jap'd, 1/2 doz. 22.00; Nickel, 24.00
Excelsior 1/2 doz. 22.00
Garland 1/2 doz. 22.00
Gilt Edge 1/2 doz. 24.00
Grand Rapids 1/2 doz. 24.00
Grand Republic 1/2 doz. 24.00
Imperial 1/2 doz. 24.00
Improved Parlor Queen, 1/2 doz. 24.00
Jannaped 1/2 doz. 27.00
Nickel 1/2 doz. 27.00
Ladies' Friend 1/2 doz. 15.00
Ladies' Friend No. 2 1/2 doz. 15.00
Parlor Queen 1/2 doz. 27.00
Our Leader 1/2 doz. 19.00
Our Own 1/2 doz. 27.00
Rapid Jap'd, 1/2 doz. 22.00; Nickel, 24.00
Reliable 1/2 doz. 22.00
Select 1/2 doz. 22.00
Standard 1/2 doz. 22.00
Supreme 1/2 doz. 22.00
The Star 1/2 doz. 22.00
Triumph 1/2 doz. 22.00
Bissell Carpet Sweeper Co. make the following rebates:
1.00 per doz. in 5 doz. lots.
2.00 per doz. in 10 doz. lots.

Lawn—
Thompson Mfg. Co. 30¢
Davies Lawn 35¢

Swings—
List October 19, 1893. Old established straight weights. Short Weight goods sold at lower prices.

Tacks, Brads &c.—
American, Blued 47¢
American, Tin'd and Cop'd 52¢
Steel, Bright and Blued 47¢
Steel, Tinned and Coppered 52¢
Swedish Iron, S. S. Blued 40¢
Swedish Iron, S. S. Tinned 47¢
American Iron Tacks, Domestic 37¢
American Iron Tacks, Foreign 50¢
Swedish Iron Tacks—
S. S. Blued 37¢
S. S. Tinned 47¢
Lanc. Blued 30¢
Lanc. Tinned 37¢
Upholsterers' S. S. 47¢
Upholsterers' Lanc. 37¢
Gimp Tacks—
S. S. Blued 30¢
S. S. Tinned 47¢
Lanc. Blued 30¢
Lanc. Tinned 37¢
Basket and Trimmers' Tacks—
Lanc. 20¢
S. S. 30¢
Zungarian Nails 35¢
Common and Patent Brads 35¢
Brush Tacks and Nails, S. S. 20¢
Looking Glass Tacks, S. S. 5¢
Picture-Frame Points, S. S. 12¢
Lace Tacks Blued 12¢
Lace Tacks, Tinned 20¢
Finishing Nails 52¢
Trunk and Clout Nails—
Black 52¢
Tinned or Coppered 57¢
Basket Nails 37¢
Chair Nails 35¢
Clair Box Nails 30¢
Tin Capped Nails 50¢

Miscellaneous—
Double Point 85¢ @ 85¢ & 10¢
Wire Carpet Nails 60¢ @ 10¢ & 10¢
Bill Nye Brad Box 1.00
Bonnie Blue 1/2 box 1.50
Claw Handle Carpet 1/2 gross 4.00
Home Tacks, No. 50 1/2 case (12 cartons), 35.00; No. 100, 1/2 case (12 cartons), 72.00
Home Nails, No. 200, 1/2 case (12 cartons), 30.00; No. 400, 1/2 case (12 cartons), 60.00
Parlisan Gilt Nails, cartoon 50
Plymouth Rock Carpet Tacks 20¢
Upholsterers' Nails 60¢ & 10¢

Wire Brads and Nails—
Steel-Wire Brads, R. & E. Mfg. Co.'s list 60¢ & 10¢ & 10¢

Tanks Oil—
Emerald, S. S. & Co.: 30-gal. 83.75; 60-gal. 111 each 60¢ & 10¢ & 5¢

Tapes, Measuring—
American 40¢ @ 10¢
Chesterman's Regular list 30¢ @ 50¢
Excelsior, Special list 20¢
Spring 40¢

Thermometers—
Tin Case 80¢ @ 80¢ & 10¢

Thimble Skeins—See Skeins.

Ties Bale—Steel.
Standard Wire, list 60¢ & 10¢ & 5¢

Tinners' Shears, &c.—
See Shears, Tinners' &c.

Tinware—
Stamped, Jannaped and Pieced, list Jan 20, 1887 70¢ & 10¢ @ 70¢ & 25¢

Tire Benders, Upsetters, &c.—See Benders and Upsetters.

Tobacco Cutters—
See Cutters, Tobacco.

Tools—Coopers'—
Albertson Mfg. Co. 25¢
Barton's 20¢ @ 20¢
Beatty's 33¢
Bradley's 20¢
Sandusky Tool Co. 30¢ @ 30¢
Shaves Cincinnati Tool Co. 20¢
L. & J. White 20¢ & 25¢

Tools—Lumber—
Cant Hooks, "Blue Line" 1/2 doz. 16.00
Cant Hooks, Common Finish 1/2 doz. 14.00
Cant Hooks, Mail Socket Clasp, "Blue Line" Finish 1/2 doz. 16.00
Cant Hooks, Mail Socket Clasp, Common Finish 1/2 doz. 14.50
Cant Hooks, Clip Clasp, "Blue Line" Finish 1/2 doz. 14.00
Cant Hooks, Clip Clasp, Common Finish 1/2 doz. 12.00
Hand Spikes 1/2 doz. 6 ft., 15.00; 8 ft., 20.00
Pike Poles, Pike & Hook, 1/2 doz, 12 ft., 12.50; 14 ft., 12.50; 16 ft., 14.50; 18 ft., 17.50; 20 ft., 21.50
Pike Poles, Pike only, 1/2 doz, 12 ft., 10.00; 14 ft., 11.00; 16 ft., 13.00; 18 ft., 15.00; 20 ft., 20.00
Pike Poles, not ironed, 1/2 doz, 12 ft., 8.00; 14 ft., 8.00; 16 ft., 9.00; 18 ft., 9.00; 20 ft., 10.00
Mail Iron Socket Peavies 1/2 doz. 19.00
Ring Peavies, "Blue Line" 1/2 doz. 22.00
Ring Peavies, Common 1/2 doz. 18.00
Steel Socket Peavies 1/2 doz. 21.00
Setting Poles, 1/2 doz, 13 ft., 17.00, 1/2 doz, 15 ft., 17.00
Sawing Poles, 1/2 doz. 18.00
Champion Steel Socket Peavies—
Maple Handles, 2 1/2 in. x 4 1/2 in. to 6 ft. 24.00
Maple Handles, 2 1/2 in. x 4 1/2 in. to 6 ft. 26.50
Maple Hnds, 3 in. x 4 1/2 in. to 6 ft. 29.00
Champion Solid or Split Socket Peavies—
Maple Handles, 2 1/2 in. x 4 1/2 in. to 6 ft. 22.00
Maple Handles, 2 1/2 in. x 4 1/2 in. to 6 ft. 23.50
Maple Hnds, 3 in. x 4 1/2 in. to 6 ft. 26.00
Champion Cant Hooks, with steel clasp—
Maple Handles, 2 1/2 in. x 4 1/2 in. to 5 ft. 17.50
Maple Handles, 2 1/2 in. x 4 1/2 in. to 5 ft. 19.50
Champion Lug Hooks 28.00
Champion Skidding Tongs 72.00
Champion Swamp Hooks 22.00
Champion 12 to 20 ft., ironed complete, 12 to 20 ft., 45¢
Cant Hook and Peavy Handles 45¢

Saw—
Atkins, new list 40¢
Simonds' 33¢

Transom Lifters—
See Lifters, Transom.

Traps—Game—
Blake's Patent 40¢ & 10¢ @ 60¢
Newhouse 40¢ @ 10¢ & 5¢
Oneta Pattern 75¢ @ 75¢ & 10¢
Sensible 33¢

Mouse and Rat—
Cyclone 1/2 doz. 35.25
Dandy 1/2 doz. 17.50
Hotchkiss Metallic Mouse, 5-hole traps, 1/2 doz, 75¢; in full cases, 1/2 doz. 60¢
Hotchkiss Imp. Rat Killer 1/2 doz. 18.50
Hotchkiss New Rat Killer 1/2 doz. 18.50
Ideal 1/2 doz. 10.00
Mouse, Cage, Wire 1/2 doz. 10.00
Mouse, Catch-em-alive, 1/2 doz. 2.50
Mouse Wood, Choker, 1/2 doz. 10.00
Mouse, Round Wire 1/2 doz. 1.50
Mouse, Sensible 33¢
Rat, Decoy 1/2 gr. 10.00, 10¢
Rat, Sensible 33¢
Schuyler's Rat Killer 1/2 doz. 12.50
Waddell's Go Bang, 1/2 gr. 12.50

Triers—
Balloon, Globe or Acme 1/2 doz. 1.50, 1/2 gr. 13.50
Harper, Champion or Paragon 1/2 doz. 1.75, 1/2 gr. 16.50
Butter and Cheese 25¢

Trimmers, Spoke—
Bonney's 1/2 doz. 10.00, 50¢
Ives', No. 1, 15.00; No. 2, 12.00 10¢
Stearns' 20¢ & 10¢
Douglas' 1/2 doz. 30.00, 20¢
Cincinnati 25¢
Brade's Brick 25¢ @ 25¢ & 5¢
Clement & Maynard's 20¢ @ 20¢ & 5¢
Dillon's Brk and Plastering 25¢ @ 25¢ & 10¢
Lothrop's Brick and Plastering 20¢ @ 10¢ & 35¢
Peace's Plastering 25¢ @ 25¢ & 5¢
Reed's Brick and Plastering 15¢
Rose's Brick 25¢ @ 25¢
Worral's Brick and Plastering 20¢
Cleves' Angle Trowel, 1/2 gr. No. 1, 33¢; No. 2, 30¢; No. 3, 15¢ net @ 10¢
Garden 70¢

Trucks, Warehouse, &c.—
B. & L. Block Co.'s list 40¢
Barnes' Barrel Trucks 40¢
Daisy Stove Trucks, Improved pattern 1/2 doz. 15.00

Thompson Mfg. Co.—
Tubes, Boiler—
Twine—
Flax Twine—
No. 9, 1/2 and 3/4 B. Balls 22¢
No. 12, 1/2 and 3/4 B. Balls 24¢
No. 18, 1/2 and 3/4 B. Balls 27¢
No. 24, 1/2 and 3/4 B. Balls 30¢
No. 30, 1/2 and 3/4 B. Balls 33¢
Chalk Line, Cotton, 1/2 B. Balls 17¢
Cotton Moos, 6, 9, 12 & 15 lb. to doz., 15¢ @ 17¢
Cotton Wrapping, 5 Balls to lb. 33¢ @ 14¢
2-Ply Hemp, 1/2 and 3/4 B. Balls (Spring Twine) 10¢ @ 10¢
3-Ply Hemp, 1/2 B. Balls 10¢ @ 10¢
2, 3, 4 and 5 Ply Tine, 1/2 B. Balls 8¢
Mason Line, Linen, 1/2 B. Balls 5¢
No. 24 Matress, 1/2 and 3/4 B. Balls 52¢ @ 54¢
Paper 10¢ @ 11¢
Wool 5¢ @ 6¢

Parallel—
Backus and Union 40¢
Bonney's 50¢
Double Screw Leg 15¢ @ 10¢
Fisher & Norris Double Screw 15¢ @ 10¢
Hollands 35¢ @ 40¢
Howard's 40¢
Massey Quick Action 20¢ @ 25¢
Merrill's 15¢ @ 20¢
Miller's Fall 40¢ @ 40¢
Moore's 20¢
Parker's 20¢ @ 25¢
Prentiss 20¢ @ 25¢
Sargent's 70¢ & 10¢ @ 70¢ & 10¢
Simpson's Adjustable 40¢
Stephens' 25¢ @ 30¢
Trenton 40¢ & 50¢ @ 40¢ & 10¢
Wilson's 55¢

Saw Filers—
Bonney's, Nos. 2 & 3, 15.00, 40¢ @ 10¢ & 5¢
Economy, 1/2 doz, Nos. 110, 110.00; 120, 15.00, 50¢ @ 10¢ & 5¢
Hopkins' 1/2 doz. 17.00, 10¢
Reading 40¢
Stearns' Common No. 0, 1, 2 & 3, 50¢
Stearns' Rubber Jaw, Nos. 10, 8 & 33¢
Wentworth 20¢ @ 10¢

Miscellaneous—
Bauer's Pipe Vises 10¢
Cincinnati 25¢ @ 10¢
Cowell Hand Vises 20¢
Enterprise Pipe Vise, each 3.00, 40¢
Massey Combination Pipe Vise 10¢
Phoenix Vises 33¢
Phoenix Hand Vises 1/2 doz. 3.60, 33¢

Wads—Price Per M.—
U.M.C. & W.R.A.—B. E. 11 up 85¢
U.M.C. & W.R.A.—B. E. 0 & 10 82¢
U.M.C. & W.R.A.—B. E. 8 96¢
U.M.C. & W.R.A.—B. E. 7 11.00
U.M.C. & W.R.A.—P. E. 11 up 1.15
U.M.C. & W.R.A.—P. E. 9 & 10 1.50
U.M.C. & W.R.A.—P. E. 8 1.70
U.M.C. & W.R.A.—P. E. 7 1.80
Eley's B. E. 11 and larger 1.70 @ 1.75
Eley's P. E. 12 to 20 3.00 @ 3.25

Wagon Boxes—
See Boxes, Wagon.

Wagon Jacks—
See Jacks, Wagon.

Ware, Hollow—
Cast Iron, Hollow
Stove Hollow Ware 60¢ & 10¢ @ 60¢ & 10¢
Ground 65¢ & 10¢ @ 70¢ & 5¢
Unground 65¢ & 10¢ @ 70¢ & 5¢
Gray Enamelled Ware—
Stove 50¢ @ 50¢ & 5¢
Maslin Kettles 60¢ & 10¢ @ 60¢ & 10¢
Boilers and Saucepans 40¢ @ 60¢ & 10¢
White Enamelled Ware—
Maslin Kettles 70¢ & 10¢ @ 70¢ & 5¢
Boilers and Saucepans 60¢ @ 60¢ & 10¢
Rustless Hollow Ware 60¢ @ 60¢ & 10¢
Tinned Boilers and S'pans 60¢ @ 60¢ & 10¢

Enamelled—
Agate and Granite Ware, list Jan. 1, 1894 25¢
Ironclad Enamelled Ware, Old list 50¢ & 10¢

Kettles—
Galvanized Tea-Kettles—
Inch 5 7 8 9
Each 55¢ 60¢ 65¢ 75¢

Steel Hollow Ware—
Avery Spiders and Griddles 60¢ @ 70¢
Avery Kettles 60¢ & 10¢ @ 70¢ & 10¢

Standard Fiber—
Plain, Decorated.
Cuplids 7.50
Half-peck Measure 8.50
Peck Measure 8.00
Keelers, 1 1/2 in. 3.00
Spittoons, "Daisy" 8 in. 3.50
Wash-Basins, 10 1/2 in. 1.80
Wash-Basins, 12 in. 2.00
See also Falls

Indurated Fiber—
Basins, Ringed, 1/2 doz. No. 2 2.80
Butter Bowls 15, 17 and 19-inch (8 pieces), 1/2 nest 1.50
Keelers Nested, Nos. 1, 2, 3 and 4 (4 pieces), 1/2 nest 2.55
Liquid Measures, pt. qt, 2 qt. and funnel (4 pieces), 1/2 nest 2.00
Spittoons No. 2, 1/2 doz. 3.00
Washbasins, Nested, Nos. 0, 1, 2, and 3 (4 pieces), 1/2 nest 3.75
See also Falls

Silver Plated, Hollow-
4 mo. or 5¢ cash in 30 days.
Meriden Britannia Co. 40¢
Reed & Barton. 40¢
Rogers & Brother. 40¢
Stimpson, Hall, Miller & Co.
Hartford Silver Plate Co.
William Rogers Mfg. Co. 40¢

Washers—

Size hole. 5-16 3/4 1/2 5/16 1/4
Washers. 5/4 4 3/4 2 1/2
In lots less than 2000, 1/2¢ add 1/4¢, 5-
boxes 1¢ to list.

Whips

American Whip Co. Length.	4 1/2	5 1/2	6	6 1/2	7	7 1/2	8 ft.
X. L. Whalebone Drivins.	\$13.00	20.00	22.00	24.00	27.00	30.00	33.00
Eureka, Two-thirds Whalebone.	15.00	16.50	18.00	20.00			
Bull Bone, Half-length Whalebone.			11.00	12.00	13.00	15.00	
American Standard.	8.00	8.50	9.50	10.50	12.00	13.50	15.00
True Grip, Raw Hide Center.	6.00	6.00	6.50	7.00	7.50	9.00	
New Name, Stocked Java, Black and Wine Colours.			6.00				
American, 98 Pen Whip.			6.00				
Gents' Light Driving No. 111.			6.00				
Gents' Light Driving No. 108.			5.00				
Hand-made Stocked Java No. 103.			3.75	4.00			
A large variety of cheaper grades.							50¢@83.00
Toy Whips.							\$2.00@37.50
Team Whips.							\$2.50@12.00

Wire and Wire Goods—Iron

Br. & Ann. Nos. 0 to 18. 75¢@10¢
Cop'd, Nos. 0 to 18. 75¢@10¢
Galv., Nos. 0 to 18. 75¢@10¢
Tin'd, Nos. 0 to 18. 75¢@10¢

Washer Cutters—

See Cutters. Washers.

Water Coolers—

See Coolers. Water.

Wedges—

Iron. 2 1/2¢@2 3/4¢
Steel. 3¢@3 1/4¢

Weights Sash—

Ton lots at foundry, 1/2 ton, \$15.00@16.00

Well Buckets Galvan-

ized—See Pails, Galvanized.

Wheels Well—

8 in., \$2.00; 10 in., \$2.50; 12 in., \$2.75

Galvanized Fence. 75¢@10¢
Mallin's An'aled & Tin'd on Spools. 60¢@5¢
Mallin's Brass and Cop. on Spools. 50¢@5¢
Steel Music Wire, 12 to 30, imported. 50¢@70¢
Stubs' Steel Wire. \$6.00 to 2.30¢
Tate's Spooled, Tin'd & Annealed. 60¢@5¢
Tate's Spooled Cop. and Brass. 50¢
Tinned Broom Wire, 18 to 21, 1/2¢. 4¢
Wire Clothes Line, see Lines.
Wire Picture Cord, see Cord.

Bright Wire Goods—

Standard list. 90¢@90¢15¢

Wire Cloth and Netting—

Galvanized Wire Netting. 80¢@80¢10¢5¢
Painted Screen Cloth 100 ft \$1.45@1.60

Wire Barb—

See Trade Report.

Wire Rope—See Rope, Wire.**Wrenches—**

American Adjustable. 40¢@40¢10¢
Baxter's Adjustable "S". 40¢@40¢50¢
Baxter's Diagonal. 60¢@60¢10¢
Coe's Genuine. 60¢@60¢10¢
Coe's "Mechanics". 60¢@60¢10¢
Girard Standard. 65¢@60¢70¢
Lamson & Sessions' Engineers'. 60¢@10¢
Lamson & Sessions' Standard. 70¢@10¢
Girard Agricultural. 75¢@10¢
Lamson & Sessions' Agricul'. 75¢@10¢
W & D. Agricultural. 80¢@1¢
W & D. Diamond. 50¢@50¢10¢
Acme, Bright. 50¢@50¢10¢

Acme, Nickel. 40¢@40¢5¢
Alken's Pocket (Bright). 32.50¢@2.60
Alligator. 40¢@60¢10¢
Always Ready. 33 1/2¢@10¢40¢5¢

Bemis & Call's:

Adjustable S. 35¢@5¢
Brigg's Pattern. 80¢@10¢
Combination Black. 40¢@10¢
Combination Bright. 40¢@5¢
Cylinder or Gas Pipe. 45¢@5¢
Extra Heavy. 45¢
Merick's Bright. 20¢@10¢
No. 3 Pipe Bright. 55¢
Bit Wrench, Adj., Tatum's. \$2.25. 25¢@10¢
Boardman's. 30¢@30¢5¢
Cincinnati Brace Wrenches. 25¢@10¢
Diamond Steel. 55¢@5¢
Donohue's Engineer. 50¢@10¢
Eagle. 70¢@70¢10¢
Hercules. 55¢@10¢
Tate's Vise Wrench. 40¢@40¢5¢
The Favorite Pocket, 1/2 doz \$2.40@40¢5¢
Walker's. 55¢@5¢
Webster's Pat. Combination. 25¢

Wringers, Clothes—

In lots of less than one dozen.
Am. Wringer Co.'s list, July 2, '94. 2% cash
Colly Wringer Co., list May 1, '94. 2% cash
Lobby Mfg. Co., list July 2, 1892. 2% cash
Peerless Mfg. Co., list Feb. 1892. 2% cash
National Wringer & Mfg. Co., list June 1, 1892. 2% cash

Wrought Goods—

Staples, Hooks, &c., list, March 17, 1893. 85¢@25¢@85¢@30¢

Paints, Oils and Colors.—Wholesale Prices.

Animal and Vegetable**Oils—**

Linseed, City, raw, per gal.	54	55
Linseed, City, boiled.	53	54
Linseed, Western, raw.	53	54
Lard, City, Extra Winter.	55	56
Lard, City, Prime.	53	54
Lard, City, Extra No. 1.	54	55
Lard, City, No. 1.	52	53
Lard, Western, prime.	52	53
Cotton-seed, Crude, prime.	52	53
Cotton-seed, Crude, off grades.	26	28
Cotton-seed, Summer Yellow, prime.	30	32
Cotton-seed, Summer Yellow, off grades.	30	32
Sperm, Crude.	60	62
Sperm, Natural Spring.	65	67
Sperm, Bleached Spring.	65	67
Sperm, Natural Winter.	65	67
Sperm, Bleached Winter.	70	72
Whale, Crude.	40	42
Whale, Natural Winter.	40	42
Whale, Bleached Winter.	47	49
Whale, Extra Bleached.	47	49
Sea Elephant, Bleached Winter.	26	28
Menhaden, Crude, Sound.	25	26
Menhaden, Crude, Southern.	30	31
Menhaden, Light Pressed.	35	36
Menhaden, Bleached Winter.	37	38
Menhaden, Extra Bleached.	43	44
Tallow, City, prime.	40	42
Tallow, Western, prime.	40	42
Cocoanut, Ceylon.	54¢@59¢	
Cocoanut, Cochin.	74¢	
Cod, Domestic.	34	35
Cod, Foreign.	34	35
Red Elaine.	85	88
Red Saponified.	44¢@49¢	
Bank.	28	29
Straits.	29	30
Olive, Italian, bbls.	58	58
Neatsfoot, prime.	60	65
Palm, prime, Lagos.	54¢@59¢	

Mineral Oils—

Black, 20 gravity, 25 @ 30 cold test.	7	7 1/2
Black, 20 gravity, 15 cold test.	7	8
Black, 20 gravity, summer.	5 1/2	6 1/4

Cylinder light, filtered.	12	16
Cylinder, dark, filtered.	10	13
Paraffine, 25% 24 gravity.	11	12
Paraffine, 25 gravity.	10	11
Paraffine, 28 gravity.	7 1/2	8
Paraffine, red.	9 1/2	10 1/2

Paints and Colors—

Barytes, Foreign, 1/2 ton.	\$22.00	\$24.00
Barytes, Amer. floated.	29.00	\$32.00
Barytes, Amer. No. 1.	18.00	\$18.00
Barytes, Amer. No. 2.	13.00	\$15.00
Barytes, Amer. No. 3.	11.00	\$12.00
Blue, Celestial.	6	8
Blue, Chinese.	40	50
Blue, Russian.	25	40
Blue, Ultramarine.	3	25
Brown, Spanish.	1 1/2	1
Brown, Vandyke, Amer.	3	3 1/2
Brown, Vandyke, English.	6	8
Carmine, No. 40, in bulk.	2.00	8
Carmine, No. 40, in boxes.	2.10	8
Carmine, No. 40, in ounce bottles.	3.00	8
Chalk, in bulk.	1.75	2.00
Chalk, in bbls.	100	33
China Clay, English.	13.00	\$18.00
Cobalt Oxide, prep'd.	9.00	\$11.00
Cobalt Oxide, black.	1.90	1.90
Cobalt Oxide, black.	1.90	1.90
Green, Paris, in bulk.	23	23
Green, Paris, 170 @ 175	23 1/2	23 1/2
Green, Paris, small pack.	25	29 1/2
Rebates.—3¢ @ 10 on lots of 10,000 lb or over; 2 1/2¢ on 4000 to 10,000 lb; 2¢ on 2000 to 4000 lb; 1 1/2¢ on 1000 to 2000 lb; 1¢ on 500 to 1000 lb purchased during the season.		
Green, Chrome, ordinary.	6	12
Green, Chrome, pure.	22	25
Lead, Eng., B.B. white.	7	8
Lead, Amn. White.	4 1/2	4 1/2
Dry.	5 1/2	6 1/2
In Oil.	5 1/2	6 1/2
Lead, White, in oil, 25 lb tin pails, add to keg price.	1	1 1/2
Lead, White, in oil, 12 1/2 lb tin pails, add to keg price.	1	1 1/2
Lead, White, in oil, 1 to 5 lb assorted tins, add to keg price.	1	2 1/2

Lead, Red, bbls. and 1/2 bbls.	5 1/2	5 1/2
Lead, Red, kegs.	5 1/2	5 1/2
Litharge, bbls. and 1/2 bbls.	5 1/2	5 1/2
Ocher, Rochelle.	1.35	1 1/2
Ocher, French Washed.	1 1/2	2 1/2
Ocher, German Washed.	1 1/2	3
Ocher, American.	1 1/2	3 1/2
Orange Mineral, English.	7 1/2	10 1/2
Orange Mineral, French.	10	10 1/2
Orange Mineral, German.	7 1/2	8
Orange Mineral, American.	7 1/2	8
Red, Indian, English.	5	15
Red, Indian, American.	2	6
Red, Turkey.	9	14
Red, Tuscan.	7	10
Red, Venetian, American.	70	100
Red, Venetian, English.	1.10	1.35
Sienna, Italian, Burnt and Powder.	4	5
Sienna, Ital., Burnt Lumps.	1 1/2	3 1/2
Sienna, Ital., Raw, Powder.	4 1/2	6 1/2
Sienna, Ital., Raw, Lumps.	1 1/2	3 1/2
Sienna, American, Raw.	1 1/2	1 1/2
Sienna, American, Burnt and Powdered.	1 1/2	1 1/2
Talc, French.	1 1/2	1 1/2
Talc, American.	1 1/2	1 1/2
Terra Alba, French, 100 lb.	65	75
Terra Alba, English.	65	75
Terra Alba, American No. 1.	45	50
Terra Alba, American No. 2.	45	50
Umber, Turkey, Burnt and Powdered.	2 1/2	3 1/2
Umber, Turkey, Raw and Powdered.	2 1/2	3 1/2
Umber, Turkey, R/w Lumps.	2 1/2	3 1/2
Umber, Turkey, Bnt. Amer.	1 1/2	1 1/2
Umber, Turkey, R/w Amer.	1 1/2	1 1/2
Yellow, Chrome.	10	25
Vermillion, American Lead.	11	12
Vermillion, Chinese, bulk.	43	44
Vermillion, Quicksilver bags.	44	44
Vermillion, Quicksilver sm'r pkgs.	52	60
Vermillion, English Import.	55	60
Vermillion, Imitation, Eng.	8	30
Vermillion, Trieste.	90	95
Vermillion, Chinese, bulk.	85	100
Whiting Common, 100 lb.	40	45
Whiting Gliders.	60	55
Zinc, American, dry.	3 1/2	4 1/2
Zinc, French, Red Seal.	7	7 1/2

Zinc, French, Green Seal.	8 1/2	9
Zinc, French, V. M. X.	6	7
Zinc, Antwerp, Red Seal.	6	6 1/2
Zinc, Antwerp, Green Seal.	6 1/2	7 1/2
Zinc, German, L. Z. O.	5	6
Zinc, V. M. in Poppy Oil, G. Seal, lots of 1 ton and lots less than one ton.	10 1/2	11
Zinc, V. M. in Poppy Oil, Red Seal, lots of 1 ton and over.	10 1/2	10 1/2
Discounts.—French Zinc.—Discounts on buyers of 10 bbl. lots of one or assorted grades of 15, 25 bbls., 2 1/2 %; 50 bbls., 4 %; no discount allowed on less than bbl. lots.		

Colors in Oil—

Black, Drop, Frankfort.	25	30
Black, Drop, English.	12	15
Black, Drop, Domestic.	7	10
Black, Lampblack, Best.	20	35
Black, Lampblack, Common.	7	13
Black, Ivory.	15	15
Blue, Chinese.	35	40
Blue, Prussian.	20	45
Blue, Ultramarine.	12	18
Brown, Vandyke.	7	12
Green, Chrome.	8	13
Green, Paris.	16	18 1/2
Sienna, Raw.	7	14
Sienna, Burnt.	7	14
Umber, Raw.	7	10
Umber, Burnt.	7	10

Putty—

In barrels and 1/2 bbls.	.013¢	.014
In tubs.	.013¢	.014
In tin cans.	.014¢	.015
In bladders.	.013¢	.014

Spirits Turpentine—

In regular bbls.	30 1/2	31
In machine bbls.	31	31 1/2

Glue—

Low Grade.	7	9
Cabinet.	11	14
Medium White.	12	12
Extra White.	18	20
French.	10	22
English.	10	15
Irish.	10	12 1/2

THE IRON AGE.

The oldest paper in the world devoted to the interests of the Hardware, Iron and Metal Trades, and a standard authority on all matters relating to those branches of industry.

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